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ABSTRACT

Drug use and related attitudes of U.S. high school seniors from the graduating classes of 1975-1985 and young adults in their late teens and early- to mid-twenties were studied, as part of an ongoing research project. Eleven classes of drugs were assessed: marijuana (including hashish), inhalants, hallucinogens, cocaine, heroin, other natural and synthetic opiates, stimulants (amphetamines), sedatives, tranquilizers, alcohol, and cigarettes. Several subclasses of drugs were also covered: PCP and lysergic acid diethylamide (LSD), amyl and butyl nitrites, and barbiturates and methaqualone. Attention was focused on drug use at the higher frequency levels rather than whether respondents had ever used various drugs. Of concern were: age of first use; the seniors' own attitudes and beliefs; and the attitudes, beliefs, and behaviors of others in the seniors' social environment, including perceived drug availability. The use of non-prescription stimulants, including diet pills, stay-awake pills, and pseudo-amphetamines were also reported, along with cocaine use among young people. Findings include sex differences in drug use, differences related to college plans, regional differences, and differences related to population density. The implications of findings for prevention efforts were addressed. (SW)

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National Institute on Drug Abuse

DRUG USE AMONG AMERICAN HIGH SCHOOL STUDENTS, COLLEGE STUDENTS, AND OTHER YOUNG ADULTS

National Trends through 1985

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration

DRUG USE AMONG AMERICAN HIGH SCHOOL STUDENTS, COLLEGE STUDENTS, AND OTHER YOUNG ADULTS

National Trends through 1985

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Public Health Service
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INTRODUCTION

This report is the ninth in an annual series reporting the drug use and related attitudes of America's high school seniors. The findings, which cover the high school classes of 1975 through 1985, come from an ongoing national research and reporting program entitled Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth. The program is conducted by the University of Michigan's Institute for Social Research, and is funded primarily by the National Institute on Drug Abuse. The study is sometimes referred to as the High School Senior Survey, since each year a representative sample of all seniors in public and private high schools in the coterminous United States is surveyed. However, the study also includes representative samples of young adults from previous graduating classes who are administered follow-up surveys by mail.

Published on a less frequent interval is a series of larger volumes, from which this series presents only a summary of findings. The most recent was published by the National Institute on Drug Abuse in 1984 under the title Drugs and American High School Students: 1975-1983. In addition to presenting a full chapter of detailed findings for each of the various classes of drugs, each larger volume contains chapters on attitudes and beliefs about drugs and various relevant aspects of the social milieu, as well as several appendices dealing with validity, sampling error estimation, and survey instrumentation.*

Two of the major topics which continue to be included in this present series are the current prevalence of drug use among American high school seniors, and trends in use by seniors since the study began in 1975. Also reported are data on grade of first use, trends in use at earlier grade levels, intensity of drug use, attitudes and beliefs among seniors concerning various types of drug use, and their perceptions of certain relevant aspects of the social environment.

The Inclusion of College Students and Young Adults Generally

For the first time this year, data on the prevalence and trends in drug use among young adults who have completed high school are being incorporated into this report. The period of young adulthood (late teens and early- to mid-twenties) is particularly important because this tends to be a time of peak levels of use for many drugs. The current epidemic of cocaine use among young adults also makes this an age group of particular policy importance.

The Monitoring the Future study design includes ten-year follow-up panel studies of a subsample of the participants in each participating senior class, beginning with the class of 1976. Thus, data were gathered in 1985 on representative samples of the graduating classes of 1976 through 1984, corresponding to modal ages of 19 to 27.

Separate data are provided on college students specifically. This segment of the young adult population has not been well represented in national surveys to date, because many college students live on campus, in dormitories, fraternities, and sororities, and these group dwellings are not included in the national household survey population.

Other publications from the study already have reported on various aspects of these panel data; now, beginning with the current report, this series will routinely provide data on the prevalence and trends in drug use among young adults.

Content Areas Covered in this Report

Eleven separate classes of drugs are distinguished in this report: marijuana (including hashish), inhalants, hallucinogens, cocaine, heroin, natural and synthetic opiates other than heroin, stimulants (more specifically, amphetamines), sedatives, tranquilizers, alcohol, and cigarettes. (This particular organization of drug use classes was chosen to heighten comparability with a parallel series of publications based on national household surveys on drug abuse.) Separate statistics are also presented here for several sub-classes of drugs: PCP and LSD (both hallucinogens), barbiturates and methaqualone (both sedatives), and the amyl and butyl nitrites (both inhalants). PCP and the nitrites were added to our measurements for the first time in 1979 because of increasing concern over their rising popularity and possibly deleterious effects; trend data are thus only available for them since 1979. (For similar reasons, smokeless tobacco is being added to the 1986 survey and will be included in the next report in this series.) Barbiturates and methaqualone, which constitute the two components of the "sedatives" class as used here, have been separately measured from the outset. They have been presented separately because their trend lines are substantially different.

Except for the findings on alcohol, cigarettes, and non-prescription stimulants, practically all of the information reported here deals with illicit drug use. Respondents are asked to exclude any occasions on which they used any of the psychotherapeutic drugs under medical supervision. (Some data on the medically supervised use of such drugs are contained in the full 1977, 1978, 1981, and 1983 volumes.)

Throughout this report we have chosen to focus considerable attention on drug use at the higher frequency levels rather than simply reporting proportions who have ever used various drugs. This is done to help differentiate levels of seriousness, or extent, of drug involvement. While there still is no public consensus of what levels or patterns of use constitute "abuse," there is surely a consensus that higher levels of use

Throughout this report we have chosen to focus considerable attention on drug use at the higher frequency levels rather than simply reporting proportions who have ever used various drugs. This is done to help differentiate levels of seriousness, or extent, of drug involvement. While there still is no public consensus of what levels or patterns of use constitute "abuse," there is surely a consensus that higher levels of use are more likely to have detrimental effects for the user and society than are lower levels. We have also introduced indirect measures of dosage per occasion, by asking respondents the duration and intensity of the highs they usually experience with each type of drug. One section of this report deals with those results.

For both licit and illicit drugs, separate sections of this report are devoted to age of first use; the seniors' own attitudes and beliefs; and the attitudes, beliefs, and behaviors of others in the seniors' social environment (including perceived drug availability).

In 1982 we added a special section, under "Other Findings from the Study," dealing with the use of non-prescription stimulants, including diet pills, stay-awake pills, and the "look-alike" pseudo-amphetamines. Questions on these substances were placed in the survey beginning in 1982 because the use of such substances appeared to be on the rise, and also because their inappropriate inclusion by some respondents in their answers about amphetamine use were affecting the observed trends. The "Other Findings from the Study" section continues to present trend results on those non-prescription substances.

That section also presents trend results from a set of questions on the use of marijuana at a daily or near-daily level. These questions were added to enable us to develop a more complete individual history of daily use over a period of years, and they reveal some very interesting facts about the frequent users of this drug.

In addition, the "Other Findings" section includes synopses of two monograph chapters published over the past year: one reports extensively on cocaine use among young Americans, and the second discusses the implications for prevention efforts of various findings from the study, including further evidence for the causal linkage between recent declines in marijuana use and growing concerns about the health consequences of such use. The "Other Findings" section also presents a synopsis of results from the study reported in a recent journal article on the reasons young people give for their use of the various drugs.

Purposes and Rationale for this Research

Perhaps no area is more clearly appropriate for the application of systematic research and reporting than the drug field, given its rapid rate of change, its importance for the well-being of the nation, and the amount of legislative and administrative intervention addressed to it. Young people are often at the leading edge of social change; and this has been particularly true in the case of drug use. The massive upsurge in illicit drug use during the last twenty-five years has proven to be primarily a youth phenomenon, with onset of use most likely to occur

One of the major purposes of the Monitoring the Future series is to develop an accurate picture of the current drug use situation and trends. Having a reasonably accurate assessment of the basic size and contours of the problem of illicit drug use among young Americans is a prerequisite for rational public debate and policy making. In the absence of reliable *prevalence* data, substantial misconceptions can develop and resources can be misallocated. In the absence of reliable data on *trends*, early detection and localization of emerging problems are more difficult, and assessments of the impact of major historical and policy-induced events are much more conjectural.

The Monitoring the Future study has a number of purposes in addition to prevalence and trend estimation—purposes which are not addressed in any detail in this volume. Among them are: gaining a better understanding of the lifestyles and value orientations associated with various patterns of drug use, and monitoring how those orientations are shifting over time; determining the immediate and more general aspects of the social environment which are associated with drug use and abuse; determining how drug use is affected by major transitions in social environment (such as entry into military service, civilian employment, college, unemployment) or in social roles (marriage, parenthood); distinguishing age effects from cohort and period effects in determining drug use; determining the effects of social legislation on all types of substance use; and determining the changing connotations of drug use and changing patterns of multiple drug use among youth. Readers interested in publications dealing with any of these other areas should write the authors at the Institute for Social Research, Room 2030, The University of Michigan, Ann Arbor, Michigan, 48106-1248.

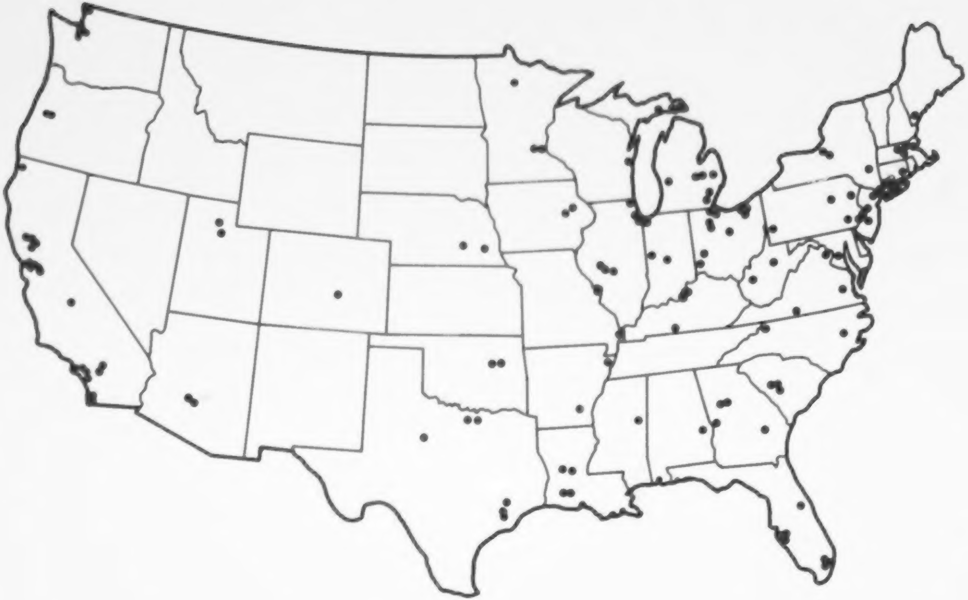
Research Design and Procedures for the Surveys of Seniors

The data from high school seniors are collected during the spring of each year, beginning with the class of 1975. Each data collection takes place in approximately 125 to 140 public and private high schools selected to provide an accurate cross-section of high school seniors throughout the coterminous United States. (See Figure 1.)

There are several reasons for choosing the senior year of high school as an optimal point for monitoring the drug use and related attitudes of youth. First, the completion of high school represents the end of an important developmental stage in this society, since it demarcates both the end of universal public education and, for many, the end of living in the parental home. Therefore, it is a logical point at which to take stock of the cumulated influences of these two environments on American youth. Further, the completion of high school represents the jumping-off point from which young people diverge into widely differing social environments and experiences. Finally, there are some important practical advantages to building a system of data collections around samples of high school seniors. The need for systematically repeated, large-scale samples from which to make reliable estimates of change requires that considerable stress be laid on efficiency as well as feasibility. The last year of high school constitutes the final point at which a reasonably good national sample of an age-specific cohort can be drawn and studied economically.

FIGURE 1

Location of Schools Surveyed in 1985



One limitation in the design is that it does not include in the target population those young men and women who drop out of high school before graduation—between 15 and 20 percent of each age cohort. The omission of high school dropouts does introduce biases in the estimation of certain characteristics of the entire age group; however, for most purposes, the small proportion of dropouts sets outer limits on the bias. Further, since the bias from missing dropouts should remain just about constant from year to year, their omission should introduce little or no bias into the various types of change being estimated for the majority of the population.* Indeed, we believe the changes observed over time for those who finish high school are likely to parallel the changes for dropouts in most instances.

Sampling Procedures. A multi-stage procedure is used for securing the nationwide sample of high school seniors each year. Stage 1 is the selection of particular geographic areas, Stage 2 the selection of one or more high schools in each area, and Stage 3 the selection of seniors within each high school.

This three-stage sampling procedure yielded the following numbers of participating schools and students:

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985
Number public schools	111	108	108	111	111	107	109	116	112	117	115
Number private schools	14	15	16	20	20	20	19	21	22	17	17
Total number schools	125	123	124	131	131	127	128	137	134	134	132
Total number students	15,791	16,678	18,436	18,924	16,662	16,524	18,267	18,348	16,947	16,499	16,502
Student response rate	78%	77%	79%	83%	82%	82%	81%	83%	84%	83%	84%

Questionnaire Administration. About ten days before the administration students are given flyers explaining the study. The actual questionnaire administrations are conducted by the local Institute for Social Research representatives and their assistants, following standardized procedures detailed in a project instruction manual. The questionnaires are administered in classrooms during a normal class period whenever possible; however, circumstances in some schools require the use of larger group administrations.

Questionnaire Format. Because many questions are needed to cover all of the topic areas in the study, much of the questionnaire content is divided into five different questionnaire forms (which are distributed to participants in an ordered sequence that ensures five virtually identical subsamples). About one-third of each questionnaire form consists of key or "core" variables which are common to all forms. All demographic variables, and nearly all of the drug use variables included in this report, are included in this "core" set of measures. Many of the questions dealing with attitudes, beliefs, and perceptions of relevant features of the social milieu are contained in only a single form, however, and are thus based on one-fifth as many cases (i.e., approximately 3,500 respondents).

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*See the Appendix for a detailed discussion of the likely effects of the exclusion of dropouts on estimates of prevalence of drug use and trends in drug use among the entire age cohort.

Research Design for the Follow-Up Surveys After High School

Beginning with the graduating class of 1976, each class is being followed up annually for a period of ten years after high school. From the approximately 17,000 seniors originally participating in a given class, a representative sample of 2,400 individuals is chosen for follow-up. In order to ensure sufficient numbers of drug users in the follow-up surveys, those fitting certain criteria of current drug use (that is, those reporting current daily marijuana use in senior year or use of any of the other illicit drugs in the previous 30 days) are selected with higher probability (by a factor of 3.0) than the remaining seniors. Differential weighting is used in all follow-up analyses to compensate for the differential sampling probabilities.

The 2,400 selected respondents from each class are randomly assigned to one of two matching groups of 1,200 each; one group is surveyed on even-numbered calendar years, while the other group is surveyed on odd-numbered years. This biannual procedure is intended to reduce respondent burden.

Follow-Up Procedures

Using information provided by respondents at the time of the senior survey (name, address, phone number, and the name and address of someone who would always know how to reach them), we contact the students selected for the panels by mail. Newsletters are sent each year and name and address corrections are requested. Questionnaires are sent by certified mail in the spring of each year. A check for $5.00, made out to the respondent, is attached to the front. Reminder letters and post cards go out at fixed intervals thereafter and finally, those not responding receive a prompting phone call from the Survey Research Center's phone interviewing facility in Ann Arbor. If requested, a second copy of the questionnaire is sent.

Panel Retention Rates

To date the panel retention rates have remained quite high. In the first follow-up after high school, about 85% of the original panel returned questionnaires. Naturally, the retention rate reduces ordinally with time; however, the 1985 panel retention from the Class of 1976—the oldest of the panels, now aged 27—remains at 71%.

Since attrition is to a modest degree associated with drug use, we have introduced corrections into the prevalence estimates presented here for the follow-up panels. These raise the prevalence estimates from what they would be uncorrected, but only slightly. We believe the resulting estimates to be the most accurate obtainable, but still low for the age group as a whole due to the omission of dropouts and absentees from the population covered by the original panels.

Representativeness and Validity

School Participation. Schools are invited to participate in the study for a two-year period, and with only very few exceptions, each school in the original sample, after participating for one year of the study, has agreed to participate for a second year. Thus far, from 66 percent to 80 percent of the schools invited to participate initially have agreed to do so each year; for each school refusal, a similar school (in terms of size, geographic area, urbanicity, etc.) is recruited as a replacement. The selection of replacement schools almost entirely removes problems of bias in region, urbanicity, and the like, that might result from certain schools refusing to participate. Other potential biases are more subtle, however. If, for example, it turned out that most schools with "drug problems" refused to participate, that would seriously bias the sample. And if any other single factor were dominant in most refusals, that also might suggest a source of serious bias. In fact, however, the reasons for a school refusing to participate are varied and are often a function of happenstance events; only a small proportion specifically object to the drug content of the survey. Thus we feel quite confident that school refusals have not seriously biased the surveys.

Schools are selected in such a way that half of each year's sample is comprised of schools which participated the previous year, and half is comprised of schools which will participate the following year. This staggered half-sample design is used to check on possible biases in the year-to-year trend estimates derived from the full samples. Specifically, separate sets of one-year trends are computed using first that half-sample of schools which participated in both 1975 and 1976, then the half-sample which participated in both 1976 and 1977, and so on. Thus, each one-year trend estimate derived in this way is based on a set of about 65 schools. When the resulting trend data (examined separately for each class of drugs) are compared with trends based on the total sample of schools, the results are highly similar, indicating that the trend estimates are little affected by turnover or shifting refusal rates in the school samples. (The absolute prevalence estimates for a given year are not as accurate using just the half-sample, of course.)

Student Participation. Completed questionnaires are obtained from 77% to 84% of all sampled students in participating schools each year. The single most important reason that students are missed is absence from class at the time of data collection; in most cases it is not workable to schedule a special follow-up data collection for absent students. Students with fairly high rates of absenteeism also report above-average rates of drug use; therefore, there is some degree of bias introduced into the prevalence estimates by our missing the absentees. Much of that bias could be corrected through the use of special weighting; however, we decided not to do so because the bias in overall drug use estimates was determined to be quite small, and because the necessary weighting procedures would have introduced undesirable complications. (Appendix A of the full reports provides a discussion of this point and the Appendix to this report shows trend and prevalence estimates which would result with corrections for absentees included.)

Of course, some students are not absent from class, but simply refuse when asked to complete a questionnaire. However, the proportion of explicit refusals amounts to less than 1 percent of the target sample.

Sampling Accuracy of the Estimates. For purposes of this introduction, it is sufficient to note that drug use estimates based on the total sample of seniors each year have confidence intervals that average about ±1% (as shown in Table 1, confidence intervals vary from ±2.2% to smaller than ±0.3%, depending on the drug). This means that had we been able to invite all schools and all seniors in the 48 coterminous states to participate, the results from such a massive survey should be within about one percentage point of our present findings for most drugs at least 95 times out of 100. We consider this to be a high level of accuracy, and one that permits the detection of fairly small changes from one year to the next.

Validity of the Measures of Self-Reported Drug Use

A question which always arises in the study of sensitive behaviors like drug use is whether honest reporting can be secured. Like most studies dealing with sensitive behaviors, we have no direct, objective validation of the present measures; however, the considerable amount of inferential evidence that exists strongly suggests that the self-report questions produce largely valid data. A more complete discussion of the contributing evidence which leads to this conclusion may be found in other publications; here we will only briefly summarize the evidence.*

First, using a three wave panel design, we established that the various measures of self-reported drug use have a high degree of reliability—a

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*Johnston, L.D. & O'Malley, P.M. "Issues of validity and population coverage in student surveys of drug use." In B.A. Rouse, N.J. Kozel, & L.G. Richards (Eds.), *Self-report methods of estimating drug use: Meeting current challenges to validity*. (National Institute on Drug Abuse Research Monograph 57). Washington, D.C.: U.S. Government Printing Office (ADM) 85-1402, 1985; Johnston, L.D., O'Malley, P.M., & Bachman, J.G. *Drugs and American high school students: 1975-1983*. (National Institute on Drug Abuse). Washington, D.C.: U.S. Government Printing Office (ADM) 80-976, 1984.

necessary condition for validity.* In essence, this means that respondents were highly consistent in their self-reported behaviors over a three- to four-year time interval. Second, we found a high degree of consistency among logically related measures of use within the same questionnaire administration. Third, the proportion of seniors reporting some illicit drug use by senior year has reached two-thirds of all respondents in peak years and nearly as high as 80% in some follow-up years, which constitutes prima facie evidence that the degree of underreporting must be very limited. Fourth, the seniors' reports of use by their friends has been highly consistent with self-reported use in terms of both prevalence and trends in prevalence, as will be discussed later in this report. Fifth, we have found self-reported drug use to relate in consistent and expected ways to a number of other attitudes, behaviors, beliefs, and social situations—in other words, there is strong evidence of "construct validity." Sixth, the missing data rates for the self-reported use questions are only very slightly higher than for the preceding non-sensitive questions, in spite of the instruction to respondents to leave blank those drug use questions they felt they could not answer honestly. And seventh, the great majority of respondents, when asked, say they would answer such questions honestly if they were users.

This is not to argue that self-reported measures of drug use are valid in all cases. In the present study we have gone to great lengths to create a situation and set of procedures in which students feel that their confidentiality will be protected. We have also tried to present a convincing case as to why such research is needed. We think the evidence suggests that a high level of validity has been obtained. Nevertheless, insofar as there exists any remaining reporting bias, we believe it to be in the direction of underreporting. Thus, we believe our estimates to be lower than their true values, even for the obtained samples, but not substantially so.

Consistency and the Measurement of Trends. One further point is worth noting in a discussion of the validity of the findings. The Monitoring the Future project is designed to be sensitive to changes from one time to another. Accordingly, the measures and procedures have been standardized and applied consistently across each data collection. To the extent that any biases remain because of limits in school and/or student participation, and to the extent that there are distortions (lack of validity) in the responses of some students, it seems very likely that such problems will exist in much the same way from one year to the next. In other words, biases in the survey estimates will tend to be consistent from one year to another, which means that our measurement of trends should be affected very little by any such biases. The smooth and consistent nature of most trend curves reported for the various drugs provides rather compelling empirical support for this assertion.

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*O'Malley, P.M., Bachman, J.G., & Johnston, L.D. "Reliability and consistency in self-reports of drug use." International Journal of the Addictions, 1983, 18, 805-824.

A Caution about the Stimulant Results for 1979-1982

In reporting their psychotherapeutic drug use, respondents are instructed to exclude not only medically-supervised use, but also any use of over-the-counter (i.e., non-prescription) drugs. However, beginning in about 1979 we believe that some of those reporting stimulant (amphetamine) use were erroneously including the use of over-the-counter stay-awake and diet pills, as well as other pills intentionally manufactured to look like amphetamines, and sold under names which sound like them, but which contain no controlled substances. The advertising and sale of over-the-counter diet pills (most of which contain the mild stimulant phenylpropanolamine) burgeoned at about that time, as was also true for the "sound-alike, look-alike" pills (most of which contain caffeine). We believe that the inappropriate inclusion of these non-controlled stimulants in the responses to our surveys accounted for much of the observed sharp rise in reported "amphetamine" use in 1980 and 1981. Therefore, the reader is advised to view the unadjusted amphetamine-use statistics for those years with some caution.

In the 1982 survey, some new questions were introduced on the use of both controlled and non-controlled stimulants. (We also kept the old version of the question in two questionnaire forms in the high school surveys so that it would be possible to "splice" the trend lines resulting from the old and new questions.) Since 1982 we have included statistics on "amphetamines, adjusted"—which are based on these new questions contained in three questionnaires in 1982 and 1983 and then in all five questionnaires in 1984 and thereafter. We believe these questions have been successful at getting respondents to exclude over-the-counter stimulants and those "look-alike" stimulants which the user knows are look-alikes. However, as is true with several other drug classes, the user may at times be ingesting a substance other than the one he or she thinks it to be. Thus, some erroneous self-reports of "amphetamine" use may remain.

An upward bias from the inclusion of over-the-counter and look-alike stimulants would have affected not only the stimulant (amphetamine) trend statistics in the years in question, but also trend statistics for the composite indexes entitled "use of any illicit drug" and "use of any illicit drug other than marijuana." Since these indexes had been used consistently in this monograph series to compare important subgroups (such as those defined by sex, region, college plans, etc.) we decided to keep them, but to include an adjusted value based on calculations in which amphetamines have been excluded. In other words, this adjusted statistic reflects "use of any illicit drugs other than marijuana or amphetamines," and is included to show what happens when amphetamine use—and any upward biases in trends it might contain—is excluded entirely from the trend statistics since 1975.

A second adjusted statistic has also been included since 1982, when the revised amphetamine questions were introduced. It gives our best estimate of overall illicit drug use, including the use of real amphetamines as measured by the revised amphetamine questions. A ◁ symbol is used to denote this estimate in any figures presenting data on these two illicit drug use indexes, whereas a ◄ symbol is used to denote estimates in which amphetamines are excluded entirely. (See Figure 6 for an example.)

It is worth noting that the two classes of drug use which are not actually amphetamine use, but which are sometimes inadvertently reported as amphetamine use, reflect two quite different types of behavior. Presumably most users of over-the-counter diet and stay-awake pills are using them for functional reasons and not for recreational purposes. On the other hand, it seems likely that most users of the look-alike pseudo-amphetamines are using them for recreational purposes. (In fact, in many cases the user who purchased them on the street may think he or she has the real thing.) Thus, the inclusion of the look-alikes may have introduced a bias in the estimates of true amphetamine use, but not in the estimates of a class of behavior—namely, trying to use controlled stimulants for recreational purposes. Some would argue that the latter is the more important factor to be monitoring in any case.

OVERVIEW OF KEY FINDINGS

This monograph reports findings from the ongoing research and reporting project entitled Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth. Each year since 1975, in-school surveys of nationally representative samples of high school seniors have been conducted. In addition, in each year since 1976, representative subsamples of the participants from each previously graduating class have been surveyed by mail.

Findings on the prevalence and trends in drug use and related factors are reported for high school seniors and also for young adult high school graduates 19-27 years old. Trend data are presented for varying time intervals, ranging from ten years (1975-1985) for the youngest age band (18 year olds) to one year for the oldest age band (25-26 year olds). Results are given separately for college students, a particularly important subset of this young adult population for which there currently exist no other nationally representative data.

A number of important findings emerge from these three national subpopulations—high school seniors, young adults through age 27, and college students. Some of them are cause for concern.

- Probably the most important finding in 1985 is that the rather steady decline of the past four years in overall illicit drug use among high school seniors appears to have halted. The proportions of seniors using any illicit drug in their lifetime, the past year, and the past month remained virtually unchanged in 1985, compared to 1984, as did the proportions of seniors using any illicit drug other than marijuana. This halt in a longer term decline was also replicated in trend data derived from the nation's college students and young adults generally.

- Concurrent with this halt in the decline in overall involvement with illicit drugs came the equally disturbing finding that cocaine use increased among seniors in 1985. (An increase in 1984 in the 30-day prevalence figure gave an early indication of this shift.) Current use (i.e., use in the prior 30 days) rose from 4.9% in 1983 to 5.8% in 1984 to 6.7% in 1985. Some 17% of all seniors in 1985 have tried it. Given the growing publicity about the very real hazards of this drug, a natural downward correction in use would have been reasonable to expect. It appears, however, that beliefs about the harmfulness of experimenting with the drug have moved very little, and even in 1985 only 34% of all seniors believe there is great risk involved in trying cocaine once or twice (reflecting practically no change since 1978).

Not only do a fair proportion of seniors try cocaine, but both lifetime prevalence and active use rise dramatically with age as people pass into their mid-twenties. Among 27 year olds in the follow-up study, roughly 40%—four in every ten of these young adults—have tried cocaine. (Only 10% of them had used cocaine when they were seniors in 1976.)

During the post-high school years, cocaine is the only one of the illicit drugs at present to show a substantial increase in active use with age. Active cocaine use has risen with age among recent cohorts until about age 22 when annual prevalence plateaus at around 22% and 30-day prevalence plateaus at around 10% to 12%. As we have reported elsewhere, relative to other illicitly used drugs, a fairly high proportion of those who try cocaine go on to use it frequently, putting themselves at substantial risk for addiction.

- Two other classes of drugs which showed relatively small increases in use among seniors in 1985 are PCP and opiates other than heroin. The annual prevalence of PCP use rose from 2.3% to 2.9% (nonsignificant) between 1984 and 1985, though it should be noted that these levels are far below the peak level of 7.0% in 1979. (The use of PCP is not reported for follow-up respondents because it is asked on a single questionnaire form and, therefore, yields too few cases for sufficiently reliable trend estimation.)

- Among seniors the use of opiates other than heroin has been relatively stable, though annual prevalence rose from 5.2% in 1984 to 5.9% in 1985 (a statistically significant increase). Among young adults in general there was also a slight (nonsignificant) increase in use in 1985.

- The steady decline since 1979 in marijuana use among seniors halted in 1985. Lifetime, annual, monthly, and daily use prevalences now stand at 54%, 41%, 26%, and 4.9% respectively. This halt is also observed among college students and the full young adult sample.

Over the prior six years, daily marijuana use had shown a dramatic decline among seniors, falling from 10.7% in 1978 to 5.0% in 1984. (It is 4.9% in 1985.) While we do not have trend data on college samples prior to 1980, there was an equally dramatic drop among college students between 1980 and 1984, from 7.2% to 3.6%; and in this case the drop did continue in 1985 (to 3.1%). Looking across all the age groups encompassed, we have seen quite parallel cross-time trends in daily use and very little difference in daily usage rates as a function of age.

- Tranquilizers had been showing a decline among high school seniors over a longer time period, from 1977 (when annual use was at 11%) to 1984 (annual use at 6.1%), but this decline also halted in 1985 (annual use remained at 6.1%). The long term steady decline in the use of this drug among college students also halted in 1985, while the full young adult sample showed a very slight further decline.

- Like tranquilizer use, the use of barbiturates is at appreciably lower levels among all groups in 1985 than when this class of drugs began to decline at least a decade ago. Annual prevalence for nonmedically supervised barbiturate use today is only 4.6% among seniors, 1.3% among college students, and 2.7% in the young adult sample 19 to 27 years old. There was a continuing slight (nonsignificant) decline in 1985 in all three populations studied.

- Two classes of drugs did show a continuing (and statistically significant) decline in 1985—stimulants and methaqualone. Of the illicitly used drugs, stimulants (more specifically, amphetamines) constitute the second most widely used class after marijuana. Since 1982, when the use of this class of drugs began to drop among seniors, annual prevalence has fallen from 20.3% to 15.8% in 1985 (2% of that drop occurred in 1985). Annual prevalence among college students, and young adults generally, has dropped even more steeply over the same interval (from 21.1% to 11.9% among college students, for example).

- Methaqualone—like barbiturates, the other class of sedatives in the study—has shown a very large decline in use (in this case since 1981) among high school seniors, college students, and the larger group of young adults surveyed. In the most recent years, shrinking availability very likely played a role in this drop, as legal manufacture and distribution within the United States ceased. In 1985 the annual prevalence rates are only 2.8% among seniors (vs. a peak of 7.6% in 1981), 1.8% among all the young adults one to nine years post high school, and 1.4% among college students specifically (from a peak of 7.2% in 1980).

- While LSD use did not appear to decline further this year among seniors (annual prevalence has fallen from 6.6% in 1979 to 4.4% in 1985), it did continue to decline significantly among the young adults and college students. Among college students annual prevalence is down from 6.3% in 1982 to 2.2% in 1985—nearly a two-thirds decline. Among all young adults one to nine years post high school, annual prevalence now stands at 3.1%, following an appreciable decline since 1982.

- *Inhalant* use among high school seniors remained fairly steady in 1985 and, in fact, has changed rather little since 1980. Adjusted annual prevalence in the senior year of high school is 7.2%. The *amyl and butyl nitrite* component of that general class of drugs also remained stable with annual prevalence of 4.0% (which is below peak levels in earlier years).

- As a result of these various changes, the three classes of illicit drugs which now impact on appreciable proportions of young Americans in their late teens and twenties are *marijuana*, *cocaine*, and *stimulants*. Among high school seniors they show annual prevalence rates in 1985 of 41%, 13%, and 16% respectively. Among college students the comparable annual prevalence rates in 1985 for marijuana, cocaine, and stimulants are 42%, 17%, and 12%; and for all high school graduates one to nine years post high school (the "young adult" sample) the respective annual prevalence rates are 41%, 20%, and 14%.

- A number of additional interesting findings emerge from the new sections in this report dealing with age-related changes in use. One is that the already high proportion of young people who by senior year have at least tried *any illicit drug* (61% in 1985) grows substantially larger up through the mid-twenties (where it reaches 75% to 80% in 1985). There is a similar rise in the proportion using *any illicit drug other than marijuana* (40% among seniors in 1985 vs. 50% to 55% among those in their mid-twenties). Lifetime prevalence for *marijuana* reaches about 70% to 75% by the mid-twenties (vs. 54% among 1985 seniors) and for *cocaine* nearly 40% (vs. 17% among 1985 seniors).

  On the other hand, *active* illicit drug use among the older age groups has tended to approximate the levels observed among seniors. This has been true for the annual prevalence of *any illicit drug*, *marijuana*, *methaqualone*, and *tranquilizers*. It has also been true for *daily marijuana use*. In fact, the young adult sample actually shows lower rates of annual prevalence than high school seniors on three drugs—*LSD*, *barbiturates* and *opiates other than heroin*. Cocaine, of course, is the exception in that active use rises until about age 22, where it reaches a plateau.

- *American college students* (one to four years past high school), when compared to all high school graduates their age, show annual usage rates for a number of drugs which are about average, including *any illicit drug*, *any illicit drug other than marijuana*, *marijuana* specifically (although their rate of *daily marijuana use* is below average for their age group), *cocaine*, and *methaqualone*. For several drugs, however, they have rates of use which are below average for their age group, including LSD and all of the psychotherapeutic drugs (stimulants, barbiturates, tranquilizers, and opiates other than heroin).

Since college-bound seniors in high school had tended to have lower rates of use on all of these illicit drugs, their eventually attaining parity on some of them reflects a "catching up" to some degree. As some results from the study published elsewhere have shown, the "catching up" may be explainable more in terms of differential rates of leaving the parental home and of getting married than in terms of any direct effects of college *per se*. (College students are more likely to leave the parental home and less likely to get married than their age peers.)

- In general, the trends since 1980 in illicit substance use among American college students are found to parallel those for their age group as a whole. That means that for most drugs there has been a decline in use over the five-year interval. Further, all young adult high school graduates through age 27, as well as college students taken separately, show trends which are highly parallel for the most part to the trends among high school seniors, although declines in the active use of many of the drugs over the past half decade have been proportionately larger in these two older populations than among high school seniors (particularly the declines in LSD and stimulant use).

- Regarding sex differences, in all three populations males are more likely to use most illicit drugs, and the differences tend to be largest at the higher frequency levels. Daily marijuana use among high school seniors in 1985, for example, is reported by 6.9% of males vs. 2.8% of females; among all young adults by 7.4% of males vs. 3.4% of females; and among college students, specifically, by 4.9% of males vs. 1.6% of females. The only exceptions to the rule that males are more frequently users of illicit drugs than females occur for stimulant use in high school and tranquilizer use among young adults post high school: in both cases females are slightly higher.

  Insofar as there have been differential trends for the two sexes among any of these populations, they have been in the direction of a diminution of differences between the sexes. For college students, previous differences in the usage rates for methaqualone, barbiturates, and LSD are disappearing as the annual prevalence rates for both sexes converge toward zero (which means that use by males has fallen more). The same is happening for methaqualone use among young adults generally as well as high school seniors. There is also some convergence between the sexes in *stimulant* use among college students and young adults, though not yet among high school students. The convergence is again due to a faster drop in use among males.

- Regarding *alcohol* use in these age groups, several findings are noteworthy. First, during the period of recent decline in the use of marijuana and other drugs there appears not to have been any "displacement effect" in terms of any increase in alcohol use among seniors. In fact, the opposite seems to be true. Since 1980, the *monthly prevalence* of alcohol use among seniors has gradually declined, from 72% in 1980 to 66% in 1985. *Daily use* declined from a peak of 6.9% in 1979 to 4.8% in 1984 (with no further decline in 1985); and the prevalence of drinking *five or more drinks in a row* during the prior two-week interval has fallen from 41% in 1983 to 37% in 1985 (the 4% drop was statistically significant).

  There remains a quite substantial sex difference among high school seniors in the prevalence of occasions of heavy drinking (28% for females vs. 45% for males in 1985), but this difference has been diminishing very gradually since the study began a decade ago.

  The data from college students, however, show a somewhat different pattern in relation to alcohol use. They show very little drop off in monthly prevalence since 1980 (about 1.5%), about the same drop in daily use as among seniors (from 6.5% in 1980 to 5.0% in 1985) and roughly a 1% to 2% *increase* in the prevalence of occasions of heavy drinking, which is at 45% in 1985—appreciably higher than the 37% among high school seniors.

  (The 45% figure is also higher than the rate observed among their age group as a whole (41%), which means that college students are above average on this dimension. Since the college-bound seniors in high school are consistently less likely to report occasions of heavy drinking than the noncollege-bound, this reflects a reversal during the years post high school.)

  A more detailed analysis shows that the divergent trends between high school students and college students in *occasions of heavy drinking* is due to an increase (since 1982) among male college students specifically. (The proportion of them reporting five or more drinks in a row rose from 52% in 1982 to 57% in 1985.) Female college students, if anything, showed some decline in such behavior over the same time interval (from 37% in 1982 to 34% in 1985). Thus an already large sex difference at the college level became even larger.

College students overall have a daily drinking rate (5.0%) which is below average for their age group as a whole (6.0%), suggesting that they are somewhat more likely to confine their drinking to weekends, on which occasions they tend to drink a lot.

In sum, heavy party drinking among males in college is common and is becoming more common. Among high school students, however, there is a decline taking place in such behavior. Sex differences in occasions of heavy drinking appear to be diminishing somewhat at the high school level at the same time that they are enlarging at the college level.

- The expansion of the study population to include college students has also uncovered some important new results concerning cigarette smoking. Since the study began in 1975, cigarettes have comprised the class of substance most frequently used on a daily basis among high school seniors (although daily use did drop considerably between 1977 and 1981). Use has remained fairly stable overall since 1981, despite the appreciable downturn in most other forms of drug use. (In 1985, daily use actually rose 0.8%, not statistically significant, to 19.5% for seniors.)

  Among young adult high school graduates aged 19 to 26, the daily rate in 1985 dropped 0.5% (also not statistically significant) to 25.9%. Among college students it also dropped 0.5% (nonsignificant) to 14.3%.

  Obviously there is a very large difference in smoking rates between college students and others their age, just as there is a very large difference in high school between the college-bound and those not college-bound. A less expected finding, however, is that within the college population, there is a substantial sex difference in smoking rates. Daily smoking, for example, is 17.5% among females in college vs. 10.0% among males in college. This sex difference is much larger than that observed among high school seniors (21% for females vs. 18% for males) or among young adults generally (27% for females vs. 25% for males).

- To summarize, over the last five years there has been an appreciable decline in the use of a number of the illicit drugs among seniors, and even larger declines in their use among American college students and young adults more generally. However, in 1985 there occurred a halt in these favorable trends in all three populations, as well as an increase in active cocaine use. There also appears to be some increase in the use of opiates other than heroin (among seniors only).

- While the overall picture has improved considerably in the past five years, the amount of illicit as well as licit drug use among America's younger age groups is still striking when one takes into account the following facts:

    By their mid-twenties, some 75% to 80% of today's young adults have tried an illicit drug, including about 50% to 55% who have tried some illicit drug other than (usually in addition to) marijuana. Even for high school seniors these proportions still stand at 61% and 40%, respectively.

    By age 27, nearly 40% have tried cocaine. As early as the senior year of high school, some 17% have done so.

    One in twenty high school seniors in 1985 smokes marijuana daily, and roughly the same proportion of young adults aged 19 to 27 do, as well.

    About one in twenty seniors drinks alcohol daily, and some 37% have had five or more drinks in a row at least once in the prior two weeks. Even more young adults one to four years past high school report such occasional heavy drinking, and the prevalence among male college students reaches 57%.

    Some 30% of seniors have smoked cigarettes in the month prior to the survey and 20% are daily smokers. In addition, many of the light smokers will convert to heavy smoking after high school. For example, 26% of those ages 19 to 27 are daily smokers, and 21% smoke a half-pack-a-day or more.

- Clearly this nation's high school students and other young adults still show a level of involvement with illicit drugs which is greater than can be found in any other industrialized nation in the world. Even by historical standards in this country, these rates still remain extremely high.

HIGH SCHOOL STUDENTS

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PREVALENCE OF DRUG USE AMONG HIGH SCHOOL STUDENTS

This section summarizes the levels of drug use reported by the high school class of 1985. Data are included for lifetime use, use during the past year, use during the past month, and daily use. There is also a comparison of key subgroups in the population (based on sex, college plans, region of the country, and population density or urbanicity).

Because we think that the revised questions on stimulant (amphetamine) use, introduced in 1982, give a more accurate picture of the actual use of that controlled substance, all references to stimulant prevalence rates in this section will be based on that revised version (including references to proportions using "any illicit drug" or "any illicit drug other than marijuana").

It should be noted that all of the prevalence statistics given in this section are based on participating seniors only. Selected prevalence rate estimates reflecting adjustments for absentees and dropouts may be found in the Appendix to this report.

Prevalence of Drug Use in 1985: All Seniors

Lifetime, Monthly, and Annual Prevalence

- Nearly two-thirds of all seniors (61%) report illicit drug use (using the revised definition of amphetamines) at some time in their lives. However, a substantial proportion of them have used only marijuana (21% of the sample or 34% of all illicit users).
- Four in every ten seniors (40%) report using an illicit drug other than marijuana at some time.*
- Figure 2 gives a ranking of the various drug classes on the basis of their lifetime prevalence figures. In addition, Table 1 provides the 95% confidence interval around the lifetime prevalence estimate for each drug.
- Marijuana is by far the most widely used illicit drug with 54% reporting some use in their lifetime, 41% reporting some use in the past year, and 26% reporting some use in the past month.

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*Use of "other illicit drugs" includes any use of hallucinogens, cocaine, or heroin or any use of other opiates, stimulants, sedatives, or tranquilizers which is not under a doctor's orders.

TABLE 1

Prevalence (Percent Ever Used) of Sixteen Types of Drugs: Observed Estimates and 95% Confidence Limits
Class of 1985

(Approx. N = 16000)

	Lower limit	Observed estimate	Upper limit
Marijuana/Hashish	52.0	54.2	56.4
Inhalants[a]	14.3	15.4	16.5
Inhalants Adjusted[b]	*16.6*	*17.9*	*19.3*
Amyl & Butyl Nitrites[c]	6.6	7.9	9.4
Hallucinogens	9.3	10.3	11.3
Hallucinogens Adjusted[d]	*11.2*	*12.2*	*13.3*
LSD	6.7	7.5	8.4
PCP[c]	3.9	4.9	6.1
Cocaine	16.1	17.3	18.6
Heroin	0.9	1.2	1.5
Other opiates[e]	9.4	10.2	11.1
Stimulants Adjusted[e,f]	*24.8*	*26.2*	*27.7*
Sedatives[e]	10.8	11.8	12.9
Barbiturates[e]	8.3	9.2	10.2
Methaqualone[e]	5.9	6.7	7.6
Tranquilizers[e]	10.9	11.9	13.0
Alcohol	90.7	92.2	93.5
Cigarettes	67.3	68.8	70.3

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[a] Data based on four questionnaire forms. N is four-fifths of N indicated.

[b] Adjusted for underreporting of amyl and butyl nitrites. See text for details.

[c] Data based on a single questionnaire form. N is one-fifth of N indicated.

[d] Adjusted for underreporting of PCP. See text for details.

[e] Only drug use which was not under a doctor's orders is included here.

[f] Adjusted for the inappropriate reporting of non-prescription stimulants.

- The most widely used class of other illicit drugs is stimulants (26% lifetime prevalence, adjusted).* Next come inhalants (adjusted) at 18% and cocaine at 17%. These are followed closely by hallucinogens (adjusted) at 12%, sedatives at 12%, and tranquilizers at 12%.**

- The inhalant estimates have been adjusted upward because we observed that not all users of one sub-class of inhalants—amyl and butyl nitrites (described below)—report themselves as inhalant users. Because we included questions specifically about nitrite use for the first time in one 1979 questionnaire form, we were able to discover this problem and make estimates of the degree to which inhalant use was being underreported in the overall estimates. As a result, all prevalence estimates for inhalants have been increased, with the proportional increase being greater for the more recent time intervals (i.e., last month, last year) because use of the other common inhalants, such as glue and aerosols, is more likely to have been discontinued prior to senior year, making nitrite use proportionally more important in later years.

- The specific classes of inhalants known as amyl and butyl nitrites, which are sold legally and go by the street names of "poppers" or "snappers" and such brand names as Locker Room and Rush, have been tried by one in every twelve seniors (8%).

- We also discovered in 1979, by adding questions specifically about PCP use, that some users of PCP do not report themselves as users of hallucinogens—even though PCP is explicitly included as an example in the questions about hallucinogens. Thus, since 1979 the hallucinogen prevalence and trend estimates also have been adjusted upward to correct for this known underreporting.***

- Lifetime prevalence for the specific hallucinogenic drug PCP now stands at 5%, somewhat lower than that of the other most widely used hallucinogen, LSD (lifetime prevalence, 8%).

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*See caution at the end of the introductory section concerning the interpretation of stimulant statistics.

**Only use which was not medically supervised is included in the figures cited in this volume.

***Because the data to adjust inhalant and hallucinogen use are available from only a single questionnaire form in a given year, the original uncorrected variables will be used in most relational analyses. We believe relational analyses will be least affected by these underestimates, and that the most serious impact is on prevalence estimates, which are adjusted appropriately.

TABLE 2

Prevalence (Percent Ever Used) and Recency of Use of Sixteen Types of Drugs (1985)

(Approx. N = 16000)

	Ever used	Past month	Past year, not past month	Not past year	Never used
Marijuana/Hashish	54.2	25.7	14.9	13.6	45.8
Inhalants[a]	15.4	2.2	3.5	9.7	84.6
Inhalants Adjusted[b]	*17.9*	*2.9*	*4.3*	*10.7*	*82.1*
Amyl & Butyl Nitrites[c]	7.9	1.6	2.4	3.9	92.1
Hallucinogens	10.3	2.5	3.8	4.0	89.7
Hallucinogens Adjusted[d]	*12.2*	*4.2*	*3.5*	*4.5*	*87.8*
LSD	7.5	1.6	2.8	3.1	92.5
PCP[c]	4.9	1.6	1.3	2.0	95.1
Cocaine	17.3	6.7	6.4	4.2	82.7
Heroin	1.2	0.3	0.3	0.6	98.8
Other opiates[e]	10.2	2.3	3.6	4.3	89.8
Stimulants Adjusted[e,f]	*26.2*	*6.8*	*9.0*	*10.4*	*73.8*
Sedatives[e]	11.8	2.4	3.4	6.0	88.2
Barbiturates[e]	9.2	2.0	2.6	4.6	90.8
Methaqualone[e]	6.7	1.0	1.8	3.9	93.3
Tranquilizers[e]	11.9	2.1	4.0	5.8	88.1
Alcohol	92.2	65.9	19.7	6.6	7.8
Cigarettes	68.8	30.1	(38.7)[g]		31.2

[a] Data based on four questionnaire forms. N is four-fifths of N indicated.

[b] Adjusted for underreporting of amyl and butyl nitrites. See text for details.

[c] Data based on a single questionnaire form. N is one-fifth of N indicated.

[d] Adjusted for underreporting of PCP. See text for details.

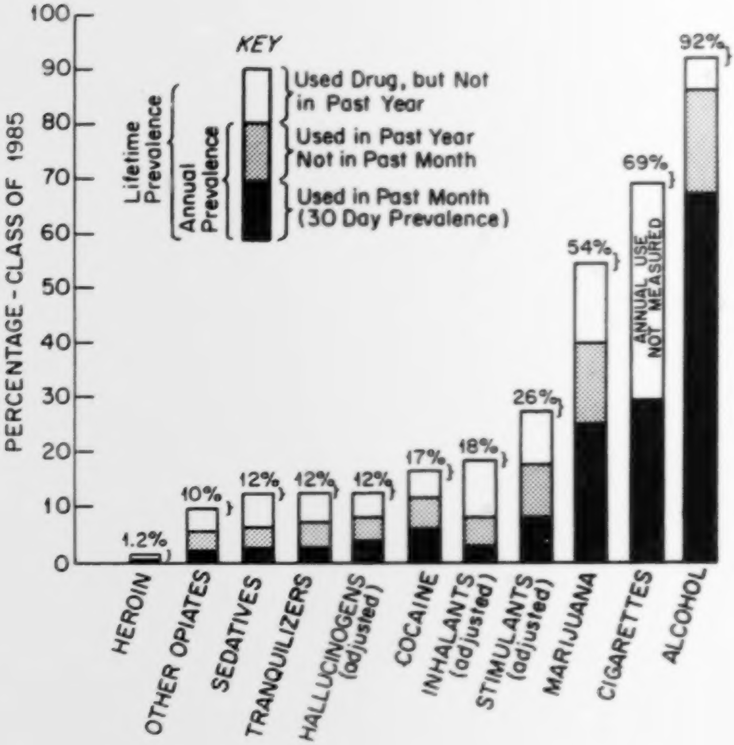
[e] Only drug use which was not under a doctor's orders is included here.

[f] Adjusted for the inappropriate reporting of non-prescription stimulants.

[g] The combined total for the two columns is shown because the question asked did not discriminate between the two answer categories.

FIGURE 2

Prevalence and Recency of Use
Eleven Types of Drugs, Class of 1985



NOTES: The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

- Opiates other than heroin have been used by about one in ten seniors (10%).

- Only 1.2% of the sample admitted to ever using any heroin, the most infrequently used drug. But given the highly illicit nature of this drug, we deem it the most likely to be underreported.

- Within the general class "sedatives," the specific drug methaqualone has been used by nearly as many seniors (7% lifetime prevalence) as the other, much broader subclass of sedatives, barbiturates (9%).

- The illicit drug classes remain in roughly the same order whether ranked by lifetime, annual, or monthly prevalence, as the data in Figure 2 illustrate. The only important change in ranking occurs for inhalants, because use of certain of them, like glues and aerosols, tends to be discontinued at a relatively early age.

- Use of either of the two major licit drugs, alcohol and cigarettes, remains more widespread than use of any of the illicit drugs. Nearly all students have tried alcohol (92%) and the great majority (66%) have used it in just the past month.

- Some 69% report having tried cigarettes at some time, and 30% smoked at least some in the past month.

Daily Prevalence

- Frequent use of these drugs is of greatest concern from a health and safety standpoint. Tables 6 (page 37) and 10 (page 45) and Figure 3 show the prevalence of daily or near-daily use of the various classes of drugs. For all drugs except cigarettes, respondents are considered daily users if they indicate that they had used the drug on twenty or more occasions in the preceding 30 days. In the case of cigarettes, respondents explicitly state the use of one or more cigarettes per day.

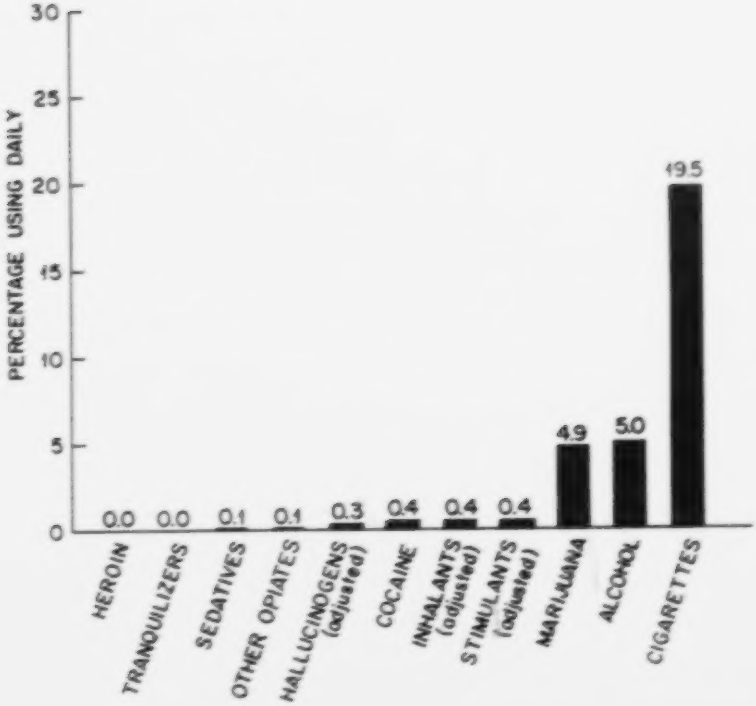
- The displays show that cigarettes are used daily by more of the respondents (20%) than any of the other drug classes. In fact, 12.5% say they smoke half-a-pack or more per day.

- Another important fact is that marijuana is still used on a daily or near-daily basis by a substantial fraction of the age group (4.9%), or about one in every twenty seniors. At present virtually the same proportion (5.0%) drink alcohol that often.

- Less than 1% of the respondents report daily use of any one of the illicit drugs other than marijuana. Still, 0.4% report unsupervised daily use of cocaine,

FIGURE 3

Thirty-Day Prevalence of Daily Use
Eleven Types of Drugs, Class of 1985



inhalants (adjusted) and amphetamines (revised version which excludes the non-prescription stimulants). The next highest daily-use figure is for hallucinogens (adjusted), PCP specifically, and nitrites—all at 0.3%. While very low, these figures are not inconsequential, given that 1% of each high school class represents over 30,000 individuals.

- Sedatives and opiates other than heroin are used daily by only about 0.1%.
- While daily alcohol use stands at 5.0% for this age group, a substantially greater proportion report occasional heavy drinking. In fact, 37% state that on at least one occasion during the prior two-week interval they had five or more drinks in a row.

Noncontinuation Rates

An indication of the extent to which people who try a drug do not continue to use it can be derived from calculating the percent, based on those who ever used a drug (once or more), who did not use it the 12 months preceding the survey.* These "noncontinuation rates" are provided for all drug classes in Figure 4 for the Class of 1985. We use the word "noncontinuation" rather than "discontinuation," since the latter might imply discontinuing an established pattern of use, and our current operational definition includes experimental users as well as established users.

- It may be seen in Figure 4 that noncontinuation rates vary widely among the different drugs.
- The highest noncontinuation rate by senior year (63%) is found for inhalants, most of which tend to be used at younger ages. The nitrites specifically, however, are used somewhat later as the 49% noncontinuation rate illustrates.
- Cocaine on the other hand, partly because of its relatively late age of onset, has the lowest noncontinuation rate in senior year of any of the illicit drugs (24%).
- Marijuana also has a low noncontinuation rate (25%); but this occurs not because onset comes later than for
- Frequent use of these drugs is of greatest concern from a health and safety standpoint. Tables 6 and 10

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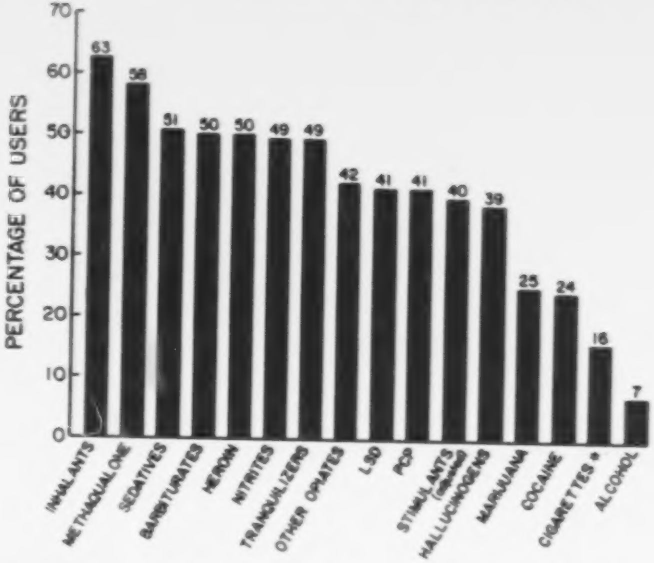
*This operationalization of noncontinuation has an inherent problem in that users of a given drug who initiate use in senior year by definition cannot be noncontinuers. Thus, the definition tends to understate the noncontinuation rate, particularly for drugs that tend to be initiated late in high school rather than in earlier years.

FIGURE 4

Noncontinuation Rates: Percent of Seniors Who Used Drug Once or More in Lifetime but Did Not Use in Past Year



*Percent of regular smokers (ever) who did not smoke at all in the past 30 days.

most drugs (the opposite is true), but simply because a relatively high proportion of users continue to use at some level over an extended period.

- Methaqualone currently shows a relatively high noncontinuation rate (58%), which accounts in part for the recent dramatic decline in overall use.

- The remaining illicit drugs have noncontinuation rates ranging from 39% to 51%.

- Noncontinuation rates for the two licit drugs are extremely low. Alcohol, which has been tried by nearly all seniors (93%), is used in senior year by nearly all of those who have ever tried it (93% of the 93%).

- For cigarettes the definition of continuation is a little different; it is the percent of those who say they ever smoked "regularly" who also reported smoking at least one cigarette during the past month. Hardly any of these regular smokers (only 16% of them) have ceased active use. (A comparable definition of noncontinuation to that used for other drugs is not possible, since cigarette use in the past year is not asked of respondents.)

Prevalence Comparisons for Important Subgroups

Sex Differences

- In general, higher proportions of males than females are involved in illicit drug use, especially heavy drug use; however, this picture is a complicated one (see Tables 3 through 6).

- Overall the proportion using marijuana is only slightly higher among males, but daily use of marijuana is more than twice as frequent among males (6.9% vs. 2.8% for females).

- Males also have considerably higher prevalence rates on most other illicit drugs. The annual prevalence (Table 4) for inhalants (unadjusted and adjusted), hallucinogens (unadjusted and adjusted), heroin, methaqualone, and the specific drugs PCP, LSD, and the nitrites tend to be one and one-half to two and one-half times as high among males as among females. Males also report somewhat higher annual rates of use than females for cocaine, opiates other than heroin, tranquilizers, and barbiturates. Further, males account for an even greater share of the frequent or heavy users of these various classes of drugs.

TABLE 3

Lifetime Prevalence of Use of Sixteen Types of Drugs by Subgroups, Class of 1985

(Entries are percentages)

	Marijuana	Inhalants[a]	Amyl/Butyl Nitrites	Hallucinogens[a]	LSD	PCP	Cocaine	Heroin	Other Opiates	Stimulants[b] (adjusted)	Sedatives	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Cigarettes
All Seniors	54.2	15.4	7.9	10.3	7.5	4.9	17.3	1.2	10.2	26.2	11.8	9.2	6.7	11.9	92.2	68.8
Sex:																
Male	56.6	18.5	11.1	12.4	9.4	6.6	19.7	1.4	11.3	24.6	12.3	9.9	7.1	11.7	92.6	67.4
Female	51.5	12.4	4.9	8.0	5.8	3.1	14.8	0.8	9.1	27.6	11.0	8.3	6.0	11.7	91.9	69.7
College Plans:																
None or under 4 yrs	59.1	18.5	9.2	12.5	9.7	6.8	20.2	1.6	11.5	31.9	15.2	11.9	8.7	13.4	93.0	75.9
Complete 4 yrs	50.2	14.5	6.9	8.0	5.8	3.4	14.6	0.9	9.3	22.6	9.6	7.4	5.3	10.8	91.9	63.7
Region:																
Northeast	62.2	18.3	10.0	15.7	9.4	7.3	25.9	1.6	12.0	27.8	13.4	10.5	7.9	14.0	95.0	71.4
North Central	53.8	14.8	7.5	10.2	8.5	3.1	11.5	1.2	10.4	27.7	12.0	9.6	6.8	11.5	93.5	71.6
South	44.5	13.0	6.0	5.8	4.8	3.4	11.1	1.2	7.2	22.1	11.1	8.0	6.7	11.1	89.7	65.1
West	60.4	17.0	9.2	10.9	8.2	7.[illegible]	25.4	0.8	12.7	29.1	10.9	9.1	4.9	11.2	90.6	67.4
Population Density:																
Large SMSA	59.2	14.9	8.8	13.9	8.1	6.2	24.1	1.4	9.8	25.8	12.3	9.8	7.0	11.9	93.5	70.2
Other SMSA	54.6	15.6	8.7	9.6	8.0	4.3	16.2	1.2	11.0	26.2	12.0	8.9	7.2	11.7	91.4	67.8
Non-SMSA	49.3	15.6	6.1	8.2	6.4	4.5	13.1	1.0	9.5	26.8	11.2	9.3	5.6	12.1	92.0	68.9

[a] Unadjusted for known underreporting of certain drugs. See text for details.

[b] Adjusted for the inappropriate reporting of non-prescription stimulants.

- Only in the case of stimulants do the annual prevalence rates (as well as frequent usage patterns) for females exceed those for males—and then only by small amounts. Annual prevalence for stimulants (adjusted) is 16.4% for females vs. 14.9% for males. This reversal in sex differences is due to the fact that substantially more females than males use stimulants for purposes of weight loss—an instrumental, as opposed to social recreational, use of the drug.

- Despite the fact that all but one of the individual classes of illicit drugs are used more by males than by females, the proportions of both sexes who report using some illicit drug other than marijuana during the last year are not substantially different (28% for males vs. 26% for females; see Figure 12). Even if amphetamine use is excluded from the comparisons altogether, fairly comparable proportions of both sexes (23% for males vs. 19% for females) report using some illicit drug other than marijuana during the year. If one thinks of going beyond marijuana as an important threshold point in the sequence of illicit drug use, then nearly equal proportions of both sexes were willing to cross that threshold at least once during the year. However, on the average the female "users" take fewer types of drugs and use them with less frequency than their male counterparts.

- Frequent use of alcohol tends to be disproportionately concentrated among males. Daily use, for example, is reported by 7.0% of the males vs. only 3.0% of the females. Also, males are more likely than females to drink large quantities of alcohol in a single sitting (i.e., 45% of males report taking five or more drinks in a row in the prior two weeks, vs. 28% of females).

- Finally, for cigarettes, there is not at present an appreciable sex difference. For example, at the level of smoking a half-a-pack or more daily: 12.0% of the females smoke this heavily versus 12.3% of the males. There is a larger difference in proportions reporting any use during the past month; 31% of the females versus 28% of the males.

Differences Related to College Plans

- Overall, seniors who are expecting to complete four years of college (referred to here as the "college-bound") have lower rates of illicit drug use than those not expecting to do so (see Tables 3 through 6 and Figure 13).

TABLE 4

Annual Prevalence of Use of Sixteen Types of Drugs by Subgroups, Class of 1985

(Entries are percentages)

	Marijuana	Inhalants [a]	Amyl/Butyl Nitrites	Hallucinogens [a]	LSD	PCP	Cocaine	Heroin	Other Opiates	Stimulants [b] (adjusted)	Sedatives	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Cigarettes [c]
All Seniors	40.6	5.7	4.0	6.3	4.4	2.9	13.1	0.6	5.9	15.8	5.8	4.6	2.8	6.1	85.6	–
Sex:																
Male	43.1	6.9	5.8	8.1	5.9	4.1	14.8	0.8	6.8	14.9	6.5	5.2	3.5	6.4	86.2	–
Female	37.8	4.5	2.1	4.4	2.8	1.7	11.2	0.3	5.1	16.4	4.8	3.9	2.1	5.7	85.0	–
College Plans:																
None or under 4 yrs	44.0	5.8	4.9	7.7	5.6	3.7	14.7	0.7	6.6	19.7	7.5	6.2	3.6	6.8	86.0	–
Complete 4 yrs	37.5	5.7	3.4	5.0	3.4	2.2	11.4	0.5	5.4	13.3	4.7	3.6	2.3	5.5	85.5	–
Region:																
Northeast	48.2	8.0	5.5	9.9	5.4	5.0	20.8	0.5	7.3	16.8	6.8	5.3	3.6	7.1	90.6	–
North Central	40.5	5.8	4.3	6.8	5.3	1.7	8.2	0.6	6.3	17.3	5.9	4.9	2.8	6.0	86.7	–
South	31.0	4.2	2.5	3.2	2.8	1.4	7.5	0.6	3.8	12.8	5.5	4.2	2.8	5.9	81.2	–
West	46.2	5.4	4.2	6.3	4.6	4.6	19.7	0.3	7.1	17.3	5.0	4.1	1.9	5.3	84.6	–
Population Density:																
Large SMSA	44.4	5.9	3.8	8.3	4.1	4.0	18.8	0.7	6.0	15.0	5.6	4.4	3.0	5.8	87.0	–
Other SMSA	40.7	5.9	3.9	6.1	4.8	2.5	12.4	0.7	6.4	15.7	5.7	4.2	3.1	6.0	85.0	–
Non-SMSA	37.3	5.4	4.1	5.0	4.1	2.6	9.2	0.4	5.2	16.6	6.1	5.4	2.3	6.5	85.1	–

[a] Unadjusted for known underreporting of certain drugs. See text for details.

[b] Adjusted for the inappropriate reporting of non-prescription stimulants.

[c] Annual prevalence is not available.

- Annual marijuana use is reported by 38% of the college-bound vs. 44% of the noncollege-bound.

- There is a substantial difference in the proportion of these two groups using any illicit drug(s) other than marijuana (adjusted). In 1985, 24% of the college-bound reported any such behavior in the prior year vs. 32% of the noncollege-bound. (If amphetamine use is excluded from these "other illicit drugs," the figures are 19% vs. 24%, respectively.)

- For most of the specific illicit drugs other than marijuana, annual prevalence is higher—sometimes substantially higher—among the noncollege-bound, as Table 4 illustrates. In fact, current (30-day) prevalence is roughly one and one-half to two times as high among the noncollege-bound as among the college-bound for hallucinogens (LSD in particular), stimulants (revised), sedatives (especially methaqualone), and cocaine.

- Frequent use of many of these illicit drugs shows even larger contrasts related to college plans (see Table 6). Daily marijuana use, for example, is more than twice as high among those not planning four years of college (6.7%) as among the college-bound (3.3%).

- Frequent alcohol use is also more prevalent among the noncollege-bound. For example, drinking on a daily basis is reported by 6.4% of the noncollege-bound vs. only 4.0% of the college-bound. Instances of heavy drinking are also related to college plans: 33% of the college-bound report having five or more drinks in a row at least once during the preceding two weeks, vs. 42% of the noncollege-bound; drinking that heavily on six or more occasions in the last two weeks is reported by 3.9% of the college-bound vs. 7.1% of the noncollege-bound. On the other hand, there are practically no differences between these groups in lifetime, annual, or monthly prevalence of alcohol use.

- By far the largest difference in substance use between the college and noncollege-bound involves cigarette smoking. There is a dramatic difference here, with only 6.5% of the college-bound smoking a half-a-pack or more daily compared with 20.7% of the noncollege-bound.

40

TABLE 5

Thirty-Day Prevalence of Use of Sixteen Types of Drugs by Subgroups, Class of 1985

(Entries are percentages)

	Marijuana	Inhalants[a]	Amyl/Butyl Nitrites	Hallucinogens[a]	LSD	PCP	Cocaine	Heroin	Other Opiates	Stimulants[b] (adjusted)	Sedatives	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Cigarettes
All Seniors	25.7	2.2	1.6	2.5	1.6	1.6	6.7	0.3	2.3	6.8	2.4	2.0	1.0	2.1	65.9	30.1
Sex:																
Male	28.7	2.8	3.0	3.4	2.4	2.4	7.7	0.3	2.6	6.5	3.0	2.4	1.3	2.2	69.8	28.2
Female	22.4	1.7	0.4	1.4	0.8	0.7	5.6	0.1	2.0	7.1	1.8	1.6	0.7	1.9	62.1	31.4
College Plans:																
None or under 4 yrs	29.0	2.3	1.8	2.9	2.0	1.7	7.9	0.2	2.4	9.2	3.1	2.5	1.4	2.3	67.9	40.5
Complete 4 yrs	22.7	2.1	1.6	1.9	1.3	1.4	5.5	0.2	2.3	5.3	1.9	1.6	0.7	1.8	64.6	22.8
Region:																
Northeast	32.0	3.6	2.2	4.3	2.1	2.1	12.0	0.3	3.1	7.3	3.0	2.3	1.4	2.6	72.3	34.2
North Central	26.1	2.3	1.7	2.8	2.3	0.9	3.9	0.3	1.8	7.7	2.8	2.2	1.1	2.1	66.8	34.1
South	18.0	1.5	1.2	1.2	0.9	0.7	3.3	0.3	1.9	5.4	2.2	1.9	0.9	2.1	60.0	25.6
West	29.7	1.7	1.5	1.8	1.3	3.5	9.8	0.1	3.0	7.3	1.7	1.5	0.4	1.3	66.2	26.3
Population Density:																
Large SMSA	28.5	2.6	2.1	3.6	1.5	2.1	10.2	0.3	2.2	6.5	2.8	2.1	1.5	2.0	67.4	31.9
Other SMSA	25.9	1.8	1.3	2.2	1.7	1.4	6.1	0.2	2.6	6.8	2.2	1.8	0.8	1.9	65.1	28.5
Non-SMSA	23.0	2.5	1.7	1.9	1.7	1.5	4.5	0.2	2.1	7.1	2.4	2.2	0.8	2.3	65.9	30.8

[a] Unadjusted for known underreporting of certain drugs. See text for details.

[b] Adjusted for the inappropriate reporting of non-prescription stimulants.

TABLE 6

Thirty-Day Prevalence of Daily Use of Marijuana, Alcohol, and Cigarettes by Subgroups, Class of 1985

		Percent who used daily in last 30 days			
				Cigarettes	
	N (Approx.)	Marijuana	Alcohol	One or more	Half-pack or more
All Seniors	16000	4.9	5.0	19.5	12.5
Sex:					
Male	7600	6.9	7.0	17.8	12.3
Female	8000	2.8	3.0	20.6	12.0
College Plans:					
None or under 4 yrs	5600	6.7	6.4	29.6	20.7
Complete 4 yrs	9300	3.3	4.0	12.4	6.5
Region:					
Northeast	3700	6.8	6.6	24.9	17.0
North Central	4400	5.5	4.4	22.4	14.9
South	4900	3.0	5.0	16.0	9.7
West	3000	4.5	4.0	14.2	7.6
Population Density:					
Large SMSA	4200	5.8	5.3	21.9	14.4
Other SMSA	6900	5.0	5.1	17.7	11.0
Non-SMSA	4900	3.8	4.8	19.9	12.9

Regional Differences

- There are now some fair-sized regional differences in rates of illicit drug use among high school seniors. (See Figure 5 for a regional division map of the states included in the four regions of the country.) The highest (adjusted) rates are in the Northeast and West, where 53% say they have used a drug illicitly in the past year, followed by the North Central with 46%, and the South with only 37% having used any illicit drug (see Figure 15).

- There are comparable regional variations in terms of the percent using some illicit drug other than marijuana (adjusted) in the past year: 33% in the Northeast and West, 26% in the North Central, and 21% in the South.

- The Northeast and West rank relatively high in the use of some illicit drug other than marijuana, due in part to their high level of cocaine use. In fact, the regional differences in cocaine have been the largest observed. For example, annual prevalence is nearly three times as high in the Northeast (20.8%) and West (19.7%) as in the South (7.5%). The North Central also has a relatively low prevalence rate (8.2%).

- Other specific illicit substances vary in the extent to which they show regional variation, as Table 4 illustrates for the annual prevalence measure.

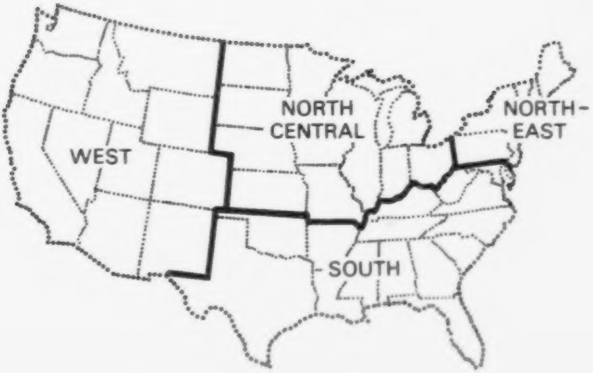
  Several drugs are highest in the Northeast and lowest in the South with the West and North Central in between: these include inhalants (unadjusted and adjusted), the nitrites specifically, hallucinogens (unadjusted and adjusted), PCP specifically, and other opiates. Interestingly, despite its quite high rate of use of some drugs, it is the West that shows the lowest levels of use for barbiturates, methaqualone, tranquilizers, and heroin (all central nervous system depressants). For all of these the Northeast shows the highest rate of use. Stimulants show still a third pattern, with the highest use in the North Central and West and lowest in the South.

- Alcohol use—in particular, the rate of occasional heavy drinking—tends to be somewhat lower in the South and West than it is in the Northeast and North Central.

- A similar though larger regional difference occurs for regular cigarette smoking. Smoking half-a-pack or more a day occurs most often in the Northeast (17% of seniors) and the North Central (15%) with the South (10%) somewhat lower, and the West (8%) lower still.

FIGURE 5

States Included in the Four Regions of the Country



These are the four major regions of the country as defined by the U.S. Bureau of the Census.

Differences Related to Population Density

- Three levels of population density (or urbanicity) have been distinguished for analytical purposes: (1) Large SMSA's, which are the twelve largest Standard Metropolitan Statistical Areas in the 1980 Census; (2) Other SMSA's, which are the remaining Standard Metropolitan Statistical Areas; and (3) Non-SMSA's, which are sampling areas not designated as metropolitan.

- Overall illicit drug use is highest in the largest metropolitan areas (50% annual prevalence, adjusted), slightly lower in the other metropolitan areas (47%), and lowest in the nonmetropolitan areas (43%) (see Figure 16).

- The same ranking occurs for the use of illicit drugs other than marijuana: 30% annual prevalence (adjusted) in the largest cities, 27% in the other cities, and 26% in the nonmetropolitan areas. (With amphetamine use excluded, these numbers drop—to 25%, 21%, and 18%, respectively—but still retain the same rank order.)

- For specific drugs, one of the largest absolute differences associated with urbanicity occurs for marijuana, which has an annual prevalence of 44% in the large cities but only 37% in the nonmetropolitan areas (Table 4).

- However, by far the greatest proportional difference, as well as the greatest absolute difference, occurs for cocaine, where there is more than twice as much use in the large metropolitan areas (19%) as in the nonmetropolitan areas (9%).

- There has been some tendency for a few other drugs to be associated positively with urbanicity; however, the relationships have not been strong nor always consistent from one year to another.

RECENT TRENDS IN DRUG USE AMONG HIGH SCHOOL STUDENTS

This section summarizes trends in drug use, comparing the eleven graduating classes of 1975 through 1985. As in the previous section, the outcomes discussed include measures of lifetime use, use during the past year, use during the past month, and daily use. Also, trends are compared among the key subgroups.

Trends in Prevalence 1975-1985: All Seniors

- The years 1978 and 1979 marked the crest of a long and dramatic rise in marijuana use among American high school students. As Tables 7 through 10 illustrate, annual and 30-day prevalence of marijuana use levelled between 1978 and 1979, following a steady rise in the preceding years. In 1980 both statistics dropped for the first time and continued to decline through 1984. However, in 1985 there was a slight increase in annual and 30-day prevalence, although they are still 10% to 11% below their all time highs. Lifetime prevalence, which had remained unchanged in 1980, finally began to drop in 1981, though more gradually. Even today it is only 6% below its all time high. As we discuss later, there have been some significant changes in the attitudes and beliefs that young people hold in relation to marijuana.

- Of greater importance is the even sharper downward trend which has been continuing to occur for daily marijuana use. Between 1975 and 1978 there was an almost two-fold increase in daily use. The proportion reporting daily use in the class of 1975 (6.0%) came as a surprise to many; and then that proportion rose rapidly, so that by 1978 one in every nine high school seniors (10.7%) indicated that he or she used the drug on a daily or nearly daily basis (defined as use on 20 or more occasions in the last 30 days). In 1979 we reported that this rapid and troublesome increase had come to a halt, with a 0.4% drop occurring that year. By 1985 the daily usage rate has dropped to 4.9%—about one in every twenty seniors—actually below the 6% level we first observed in 1975. As later sections of this report document, much of this reversal appears to be due to a continuing increase in concerns about possible adverse effects from regular use, and a growing perception that peers would disapprove of regular marijuana use. It is worth noting, however, that the decline stopped in 1985, with a drop of only 0.1% from the 1984 figure of 5.0%.

TABLE 7
Trends in Lifetime Prevalence of Sixteen Types of Drugs

	Percent ever used											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change
Approx. N =	(9400)	(15400)	(17100)	(17800)	(15500)	(15900)	(17500)	(17700)	(16300)	(15900)	(16000)	
Marijuana/Hashish	47.3	52.8	56.4	59.2	60.4	60.3	59.5	58.7	57.0	54.9	54.2	−0.7
Inhalants[a]	NA	10.3	11.1	12.0	12.7	11.9	12.3	12.8	13.6	14.4	15.4	+1.0
Inhalants Adjusted[b]	NA	NA	NA	NA	18.7	17.6	17.4	18.0	18.8	19.0	17.9	−1.1
Amyl & Butyl Nitrites[c]	NA	NA	NA	NA	11.1	11.1	10.1	9.8	8.4	8.1	7.9	−0.2
Hallucinogens	16.3	15.1	13.9	14.3	14.1	13.3	13.3	12.5	11.9	10.7	10.3	−0.4
Hallucinogens Adjusted[d]	NA	NA	NA	NA	18.6	15.7	15.7	15.0	14.7	13.3	12.2	−1.1
LSD	11.3	11.0	9.8	9.7	9.5	9.3	9.8	9.6	8.9	8.0	7.5	−0.5
PCP[c]	NA	NA	NA	NA	12.8	9.6	7.8	6.0	5.6	5.0	4.9	−0.1
Cocaine	9.0	9.7	10.8	12.9	15.4	15.7	16.5	16.0	16.2	16.1	17.3	+1.2
Heroin	2.2	1.8	1.8	1.6	1.1	1.1	1.1	1.2	1.2	1.3	1.2	−0.1
Other opiates[e]	9.0	9.6	10.3	9.9	10.1	9.8	10.1	9.6	9.4	9.7	10.2	+0.5
Stimulants[e]	22.3	22.6	23.0	22.9	24.2	26.4	32.2	35.6	35.4	NA	NA	NA
Stimulants Adjusted[e,f]	NA	NA	NA	NA	NA	NA	NA	27.9	26.9	27.9	26.2	−1.7
Sedatives[e]	18.2	17.7	17.4	16.0	14.6	14.9	16.0	15.2	14.4	13.3	11.8	−1.5s
Barbiturates[e]	16.9	16.2	15.6	13.7	11.8	11.0	11.3	10.3	9.9	9.9	9.2	−0.7
Methaqualone[e]	8.1	7.8	8.5	7.9	8.3	9.5	10.6	10.7	10.1	8.3	6.7	−1.6ss
Tranquilizers[e]	17.0	16.8	18.0	17.0	16.3	15.2	14.7	14.0	13.3	12.4	11.9	−0.5
Alcohol	90.4	91.9	92.5	93.1	93.0	93.2	92.6	92.8	92.6	92.6	92.2	−0.4
Cigarettes	73.6	75.4	75.7	75.3	74.0	71.0	71.0	70.1	70.6	69.7	68.8	−0.9

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. NA indicates data not available.

[a] Data based on four questionnaire forms. N is four-fifths of N indicated.

[b] Adjusted for underreporting of amyl and butyl nitrites. See text for details.

[c] Data based on a single questionnaire form. N is one-fifth of N indicated.

[d] Adjusted for underreporting of PCP. See text for details.

[e] Only drug use which was not under a doctor's orders is included here.

[f] Adjusted for the inappropriate reporting of non-prescription stimulants.

TABLE 8
Trends in Annual Prevalence of Sixteen Types of Drugs

	Percent who used in last twelve months											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change
Approx. N =	(9400)	(15400)	(17100)	(17800)	(15500)	(15900)	(17500)	(17700)	(16300)	(15900)	(16000)	
Marijuana/Hashish	40.0	44.5	47.6	50.2	50.8	48.8	46.1	44.3	42.3	40.0	40.6	+0.6
Inhalants[a]	NA	3.0	3.7	4.1	5.4	4.6	4.1	4.5	4.3	5.1	5.7	+0.6
Inhalants Adjusted[b]	NA	NA	NA	NA	9.2	7.8	6.0	6.6	6.7	7.9	7.2	−0.7
Amyl & Butyl Nitrites[c]	NA	NA	NA	NA	6.5	5.7	3.7	3.6	3.6	4.0	4.0	0.0
Hallucinogens	11.2	9.4	8.8	9.6	9.9	9.3	9.0	8.1	7.3	6.5	6.3	−0.2
Hallucinogens Adjusted[d]	NA	NA	NA	NA	12.8	10.6	10.1	9.3	8.3	7.9	7.7	−0.2
LSD	7.2	6.4	5.5	6.3	6.6	6.5	6.5	6.1	5.4	4.7	4.4	−0.3
PCP[c]	NA	NA	NA	NA	7.0	4.4	3.2	2.2	2.6	2.3	2.9	+0.6
Cocaine	5.6	6.0	7.2	9.0	12.0	12.3	12.4	11.5	11.4	11.6	13.1	+1.5s
Heroin	1.0	0.8	0.8	0.8	0.5	0.5	0.5	0.6	0.6	0.5	0.6	+0.1
Other opiates[e]	5.7	5.7	6.4	6.0	6.2	6.3	5.9	5.3	5.1	5.2	5.9	+0.7s
Stimulants[e]	16.2	15.8	16.3	17.1	18.3	20.8	26.0	26.1	24.6	NA	NA	NA
Stimulants Adjusted[e,f]	NA	NA	NA	NA	NA	NA	NA	20.3	17.9	17.7	15.8	−1.9ss
Sedatives[e]	11.7	10.7	10.8	9.9	9.9	10.3	10.5	9.1	7.9	6.6	5.8	−0.8
Barbiturates[e]	10.7	9.6	9.3	8.1	7.5	6.8	6.6	5.5	5.2	4.9	4.6	−0.3
Methaqualone[e]	5.1	4.7	5.2	4.9	5.9	7.2	7.6	6.8	5.4	3.8	2.8	−1.0ss
Tranquilizers[e]	10.6	10.3	10.8	9.9	9.6	8.7	8.0	7.0	6.9	6.1	6.1	0.0
Alcohol	84.8	85.7	87.0	87.7	88.1	87.9	87.0	86.8	87.3	86.0	85.6	−0.4
Cigarettes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. NA indicates data not available.

[a] Data based on four questionnaire forms. N is four-fifths of N indicated.

[b] Adjusted for underreporting of amyl and butyl nitrites. See text for details.

[c] Data based on a single questionnaire form. N is one-fifth of N indicated.

[d] Adjusted for underreporting of PCP. See text for details.

[e] Only drug use which was not under a doctor's orders is included here.

[f] Adjusted for the inappropriate reporting of non-prescription stimulants.

TABLE 9
Trends in Thirty-Day Prevalence of Sixteen Types of Drugs

	Percent who used in last thirty days											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change
Approx. N =	(9400)	(15400)	(17100)	(17800)	(15500)	(15900)	(17500)	(17700)	(16300)	(15900)	(16000)	
Marijuana/Hashish	27.1	32.2	35.4	37.1	36.5	33.7	31.6	28.5	27.0	25.2	25.7	+0.5
Inhalants[a]	NA	0.9	1.3	1.5	1.7	1.4	1.5	1.5	1.7	1.9	2.2	+0.3
Inhalants Adjusted[b]	NA	NA	NA	NA	3.1	2.7	2.3	2.5	2.7	2.7	2.9	+0.2
Amyl & Butyl Nitrites[c]	NA	NA	NA	NA	2.4	1.8	1.4	1.1	1.4	1.4	1.6	+0.2
Hallucinogens	4.7	3.4	4.1	3.9	4.0	3.7	3.7	3.4	2.8	2.6	2.5	−0.1
Hallucinogens Adjusted[d]	NA	NA	NA	NA	5.5	4.4	4.4	4.3	3.8	3.6	4.2	+0.6
LSD	2.3	1.9	2.1	2.1	2.4	2.3	2.5	2.4	1.9	1.5	1.6	+0.1
PCP[c]	NA	NA	NA	NA	2.4	1.4	1.4	1.0	1.3	1.0	1.6	+0.6
Cocaine	1.9	2.0	2.9	3.9	5.7	5.2	5.8	5.0	4.9	5.8	6.7	+0.9s
Heroin	0.4	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.0
Other opiates[e]	2.1	2.0	2.8	2.1	2.4	2.4	2.1	1.8	1.8	1.8	2.3	+0.5s
Stimulants[e]	8.5	7.7	8.8	8.7	9.9	12.1	15.8	13.7	12.4	NA	NA	
Stimulants Adjusted[e,f]	NA	NA	NA	NA	NA	NA	NA	10.7	8.9	8.3	6.8	−1.5ss
Sedatives[e]	5.4	4.5	5.1	4.2	4.4	4.8	4.6	3.4	3.0	2.3	2.4	+0.1
Barbiturates[e]	4.7	3.9	4.3	3.2	3.2	2.9	2.6	2.0	2.1	1.7	2.0	+0.3
Methaqualone[e]	2.1	1.6	2.3	1.9	2.3	3.3	3.1	2.4	1.8	1.1	1.0	−0.1
Tranquilizers[e]	4.1	4.0	4.6	3.4	3.7	3.1	2.7	2.4	2.5	2.1	2.1	0.0
Alcohol	68.2	68.3	71.2	72.1	71.8	72.0	70.7	69.7	69.4	67.2	65.9	−1.3
Cigarettes	36.7	38.8	38.4	36.7	34.4	30.5	29.4	30.0	30.3	29.3	30.1	+0.8

NOTES: Level of significance of difference between the two most recent classes: s =.05, ss =.01, sss =.001. NA indicates data not available.
[a] Data based on four questionnaire forms. N is four-fifths of N indicated.
[b] Adjusted for underreporting of amyl and butyl nitrites. See text for details.
[c] Data based on a single questionnaire form. N is one-fifth of N indicated.
[d] Adjusted for underreporting of PCP. See text for details.
[e] Only drug use which was not under a doctor's orders is included here.
[f] Adjusted for the inappropriate reporting of non-prescription stimulants.

TABLE 10
Trends in Thirty-Day Prevalence of Daily Use of Sixteen Types of Drugs

	Percent who used daily in last thirty days											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change[g]
Approx. N =	(9400)	(15400)	(17100)	(17800)	(15500)	(15900)	(17500)	(17700)	(16300)	(15900)	(16000)	
Marijuana/Hashish	6.0	8.2	9.1	10.7	10.3	9.1	7.0	6.3	5.5	5.0	4.9	−0.1
Inhalants[a]	NA	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	+0.1
Inhalants Adjusted[b]	NA	NA	NA	NA	0.1	0.2	0.2	0.2	0.2	0.2	0.4	+0.2
Amyl & Butyl Nitrites[c]	NA	NA	NA	NA	0.0	0.1	0.1	0.0	0.2	0.1	0.3	+0.2
Hallucinogens	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Hallucinogens Adjusted[d]	NA	NA	NA	NA	0.2	0.2	0.1	0.2	0.2	0.2	0.3	+0.1
LSD	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0
PCP[c]	NA	NA	NA	NA	0.1	0.1	0.1	0.1	0.1	0.1	0.3	+0.2
Cocaine	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.4	+0.1
Heroin	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Other opiates[e]	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Stimulants[e]	0.5	0.4	0.5	0.5	0.6	0.7	1.2	1.1	1.1	NA	NA	NA
Stimulants Adjusted[e,f]	NA	NA	NA	NA	NA	NA	NA	0.7	0.8	0.6	0.4	−0.2
Sedatives[e]	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.0
Barbiturates[e]	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	+0.0
Methaqualone[e]	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Tranquilizers[e]	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	−0.0
Alcohol	5.7	5.6	6.1	5.7	6.9	6.0	6.0	5.7	5.5	4.8	5.0	+0.2
Cigarettes	26.9	28.8	28.8	27.5	25.4	21.3	20.3	21.1	21.2	18.7	19.5	+0.8

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. NA indicates data not available.

[a] Data based on four questionnaire forms. N is four-fifths of N indicated.

[b] Adjusted for underreporting of amyl and butyl nitrites. See text for details.

[c] Data based on a single questionnaire form. N is one-fifth of N indicated.

[d] Adjusted for underreporting of PCP. See text for details.

[e] Only drug use which was not under a doctor's orders is included here.

[f] Adjusted for the inappropriate reporting of non-prescription stimulants.

[g] Any apparent inconsistency between the change estimate and the prevalence estimates for the two most recent classes is due to rounding error.

- Until 1978, the proportion of seniors involved in any illicit drug use had increased steadily, primarily because of the increase in marijuana use. About 54% of the classes of 1978 and 1979 reported having tried at least one illicit drug during the last year, up from 45% in the class of 1975. Between 1979 and 1984, however, the proportion reporting using any illicit drug during the prior year dropped by 1 or 2% annually until this year, when no further decline was observed: in fact, there has been a slight increase in the proportion reporting use of any illicit drug in the previous year from 45.8% in 1984 to 46.3% (revised version). The earlier decline in the proportion of students having any involvement with illicit drugs appeared to be due primarily to the change in marijuana use; and the present halt in that decline is also attributable to the marijuana use trend.

- As Figure 6 and Table 11 illustrate, between 1976 and 1982 there had been a very gradual, steady increase in the proportion who have ever used some illicit drug other than marijuana. The proportion going beyond marijuana in their lifetime had risen from 35% to 45% between 1976 and 1982; in 1983 it dropped back to 44% and in 1984 the revised statistic remained stable and then decreased slightly in 1985. The annual prevalence of such behaviors (Figure 7), which had risen from 25% to 34% in 1981, leveled in 1982, and then dropped back slightly in each subsequent year to 27% in 1985. But the current (or 30-day) prevalence figures actually began to drop a year earlier—in 1982—and have shown the largest proportional drop (as may be seen in Figure 8 and in Table 11).

- Most of the earlier rise in other illicit drug use appeared to be due to the increasing popularity of cocaine with this age group between 1976 and 1979, and then due to the increasing use of stimulants between 1979 and 1982. However, as stated earlier, we believe that this upward shift had been exaggerated because some respondents included instances of using over-the-counter stimulants in their reports of amphetamine use. (See discussion at the end of the introductory section.) A rather different picture of what trends have been occurring in the proportions using illicit drugs other than marijuana emerges when self-reported amphetamine use is excluded from the calculations altogether. (This obviously understates the percent using illicits other than marijuana in any given year, but it might yield a more accurate picture of trends in proportions up through 1982, when new questions were introduced to deal with the problem directly.) Figures 6-8 (and other figures to follow) have been annotated with small markings (◂) next to each year's bar, showing where the shaded area would stop

TABLE 11

Trends in Lifetime, Annual, and Thirty-Day Prevalence in an Index of Illicit Drug Use

(Based on Original and Revised Amphetamine Questions)[a]

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	198	'84–'85 change
Approx. N =	(9400)	(15400)	(17100)	(17800)	(15500)	(15900)	(17500)	(17700)	(16300)	(15900)	(16000)	
						Percent reporting use in lifetime						
Marijuana Only	19.0	22.9	25.8	27.6	27.7	26.7	22.8	20.8	19.7	–	–	
Revised Version	–	–	–	–	–	–	–	23.3	22.5	21.3	20.9	−0.4
Any Illicit Drug Other Than Marijuana[b]	36.2	35.4	35.8	36.5	37.4	38.7	42.8	45.0	44.4	–	–	
Revised Version	–	–	–	–	–	–	–	41.1	40.4	40.3	39.7	−0.6
Total: Any Illicit Drug Use	55.2	58.3	61.6	64.1	65.1	65.4	65.6	65.8	64.1	–	–	
Revised Version	–	–	–	–	–	–	–	64.4	62.9	61.6	60.6	−1.0
						Percent reporting use in last twelve months						
Marijuana Only	18.8	22.7	25.1	26.7	26.0	22.7	18.1	17.0	16.6	–	–	
Revised Version	–	–	–	–	–	–	–	19.3	19.0	17.8	18.9	+1.1
Any Illicit Drug Other Than Marijuana[b]	26.2	25.4	26.0	27.1	28.2	30.4	34.0	33.8	32.5	–	–	
Revised Version	–	–	–	–	–	–	–	30.1	28.4	28.0	27.4	−0.6
Total: Any Illicit Drug Use	45.0	48.1	51.1	53.8	54.2	53.1	52.1	50.8	49.1	–	–	
Revised Version	–	–	–	–	–	–	–	49.4	47.4	45.8	46.3	+0.5
						Percent reporting use in last 30 days						
Marijuana Only	15.3	20.3	22.4	23.8	22.2	18.8	15.2	14.3	14.0	–	–	
Revised Version	–	–	–	–	–	–	–	15.5	15.1	14.1	14.8	+0.7
Any Illicit Drug Other Than Marijuana[b]	15.4	13.9	15.2	15.1	16.8	18.4	21.7	19.2	18.4	–	–	
Revised Version	–	–	–	–	–	–	–	17.0	15.4	15.1	14.9	−0.2
Total: Any Illicit Drug Use	30.7	34.2	37.6	38.9	38.9	37.2	36.9	33.5	32.4	–	–	
Revised Version	–	–	–	–	–	–	–	32.5	30.5	29.2	29.7	+0.5

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

[a] Revised questions about stimulant use were introduced in 1982 to exclude more completely the inappropriate reporting of non-prescription stimulants.

[b] Use of "other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use of other opiates, stimulants, sedatives, or tranquilizers not under a doctor's orders.

if amphetamine (stimulant) use were excluded entirely. The cross-time trend in these markings shows that the proportion going beyond marijuana to illicits other than amphetamines during the prior year was almost constant between 1975 and 1981. However, this figure began to drop gradually from 24% in 1981 to 21% in 1985.

- Thus, with stimulants excluded from the calculations entirely, we are seeing a gradual drop in the proportion of seniors using illicit drugs other than marijuana, following a considerable period of virtually level use. With stimulants (including the incorrectly reported ones) included in the definition, we also see a downturn in recent years, but following a period of considerable increase. Finally, using the corrected stimulant statistics for 1982 and thereafter (marked with the symbol (◁) in Figures 6-8), we still see the downturn in recent years, but it follows a period of what we deduce to have been a modest increase in use from the mid-seventies to 1982.

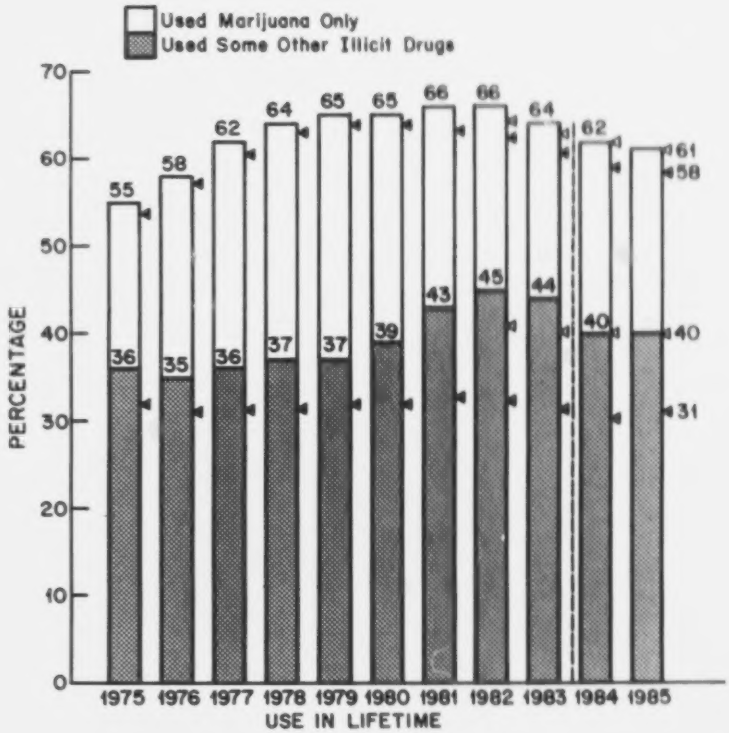
- Although the overall proportion using illicit drugs other than marijuana has changed fairly gradually during recent years, more varied and turbulent changes have been occurring for specific drugs within the class. (See Tables 7, 8, and 9 for trends in lifetime, annual, and monthly prevalence figures for each class of drugs.)

- From 1976 to 1979 cocaine exhibited a dramatic and accelerating increase in popularity, with annual prevalence going from 6% in the class of 1976 to 12% in the class of 1979—a two-fold increase in just three years. Between 1979 and 1984, we judge there to have been little or no change in any of the prevalence statistics for the nation as a whole. (Some possible regional changes will be discussed below.) In 1985, however, there were significant increases in annual and monthly use.

- Like cocaine use, inhalant use had been rising steadily in the mid 1970's, though more slowly and from a lower overall level. Annual prevalence (in the unadjusted version) rose from 3.0% in 1976 and reached a peak of 5.4% in 1979. Then, between 1979 and 1983, there was an overall decline—in part due to a substantial drop in the use of the amyl and butyl nitrites, for which annual prevalence declined from 6.5% in 1979 to 3.6% in 1983. Both measures increased slightly between 1983 and 1985, with annual use for inhalants (adjusted for use of nitrites) increasing from 6.7% in 1983 to 7.2% in 1985, and the nitrites increasing from 3.6% to 4.0%.

FIGURE 6

Trends in Lifetime Prevalence of an Illicit Drug Use Index
All Seniors



NOTES: Use of "some other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use which is not under a doctor's orders of other opiates, stimulants, sedatives, or tranquilizers.

◀ indicates the percentage which results if all stimulants are excluded from the definition of "illicit drugs." ◁ shows the percentage which results if only non-prescription stimulants are excluded.

The dashed vertical line indicates that after 1983 the shaded and open bars are defined by using the revised amphetamine questions.

- Stimulant (amphetamine) use, which had remained relatively unchanged between 1975 and 1978, began to show evidence of a gradual increase in use in 1979, with even greater increases to occur in 1980 and 1981. Between 1976 and 1981, reported annual prevalence rose by a full 10.2% (from 15.8% in 1976 to 26.0% in 1981); and daily use tripled, from 0.4% in 1976 to 1.2% in 1981. As stated earlier, we think these increases were exaggerated—perhaps sharply exaggerated—by respondents in the 1980 and 1981 surveys in particular including non-amphetamine, over-the-counter diet pills (as well as "look-alike" and "sound-alike" pills) in their answers. In 1982, we added new versions of the questions on amphetamine use, which were more explicit in instructing respondents not to include such non-prescription pills. (These were added to only three of the five forms of the questionnaire being used; the amphetamine questions were left unchanged in the other two forms until 1984.) As a result, Tables 7 through 11 give two estimates for amphetamines: one is based on the unchanged questions, which provides comparable data across time for longer-term trend estimates; the second (adjusted) estimate, based on the revised questions, provides our best assessments of current prevalence and recent trends in true amphetamine use.*

- As can be seen in 1982 and 1983, the two years for which both adjusted and unadjusted statistics are available, the unadjusted showed a considerable amount of overreporting. Both types of statistics, however, suggest that a downturn in the current use of stimulants began to occur in 1982 and has continued since. Still, in the class of 1985 more than a quarter of all seniors (26.2%) have tried amphetamines (adjusted).

- For sedatives the sustained, gradual decline between 1975 and 1979 halted in 1980 and 1981. For example, annual prevalence, which dropped steadily from 11.7% in 1975 to 9.9% in 1979, increased slightly to 10.5% by 1981. In 1982, though, the longer-term decline resumed again and annual prevalence has now fallen to 5.8%. In sum, annual sedative use has dropped by fully one-half since the study began in 1975. But, the overall trend lines for sedatives mask differential trends occurring for the two components of the

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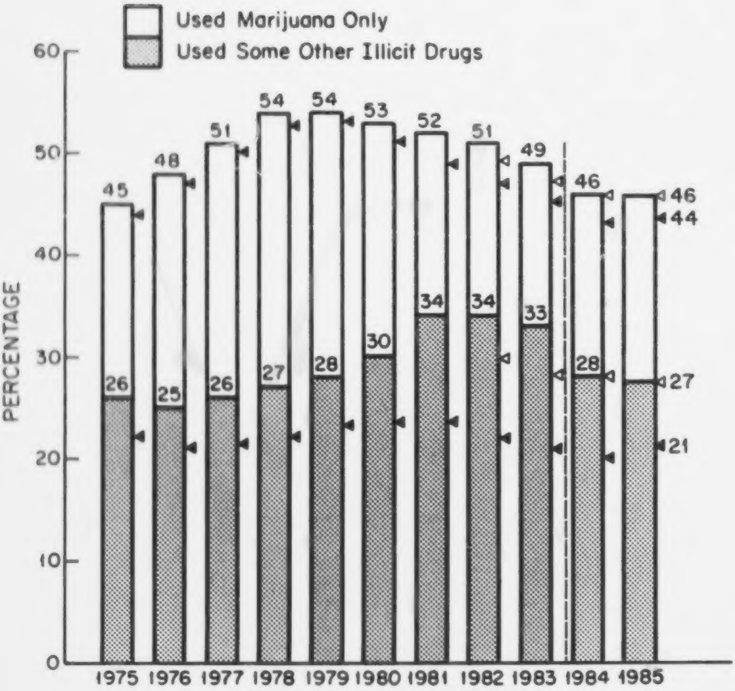
*We think the unadjusted estimates for the earliest years of the survey were probably little affected by the improper inclusion of non-prescription stimulants, since sales of the latter did not burgeon until after the 1979 data collection.

FIGURE 7

Trends in Annual Prevalence of an Illicit Drug Use Index
All Seniors



NOTES: Use of "some other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use which is not under a doctor's orders of other opiates, stimulants, sedatives, or tranquilizers.

◀ indicates the percentage which results if all stimulants are excluded from the definition of "illicit drugs." ◁ shows the percentage which results if only non-prescription stimulants are excluded.

The dashed vertical line indicates that after 1983 the shaded and open bars are defined by using the revised amphetamine questions.

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measure (see Figure 9c). Barbiturate use has declined rather steadily since 1975, and now stands at below half its 1975 level in terms of annual prevalence (i.e., at 4.6% vs. 10.7% in 1975). Methaqualone use, on the other hand, rose sharply from 1976 until 1981. (In fact, it was the only drug other than stimulants that was still rising in 1981.) But in 1982, the use of methaqualone also began to decline, which accounted for the overall sedative category resuming its decline. Annual use now stands at less than half of its peak level observed by 1981 (2.8% in 1985 vs. 7.6% in 1981).

- The usage statistics for tranquilizers peaked in 1977, and have declined since then. Lifetime prevalence has dropped from 18% in 1977 to 12% in 1985, annual prevalence from 11% to 6%, and 30-day prevalence from 4.6% to 2.1%. (Annual and 30-day rates in 1985 are unchanged from 1984, but lifetime prevalence continued to decline.)

- Between 1975 and 1979 the prevalence of heroin use had been dropping rather steadily. Lifetime prevalence dropped from 2.2% in 1975 to 1.1% in 1979 and annual prevalence had also dropped by half, from 1.0% in 1975 to 0.5% in 1979. This decline halted in 1980 and the statistics have remained almost constant since then.

- From 1975 to 1981 the use of opiates other than heroin remained fairly stable, with annual prevalence at or near 6%. Annual prevalence then declined to 5.1% in 1983, but has since risen slightly to 5.9% in 1985.

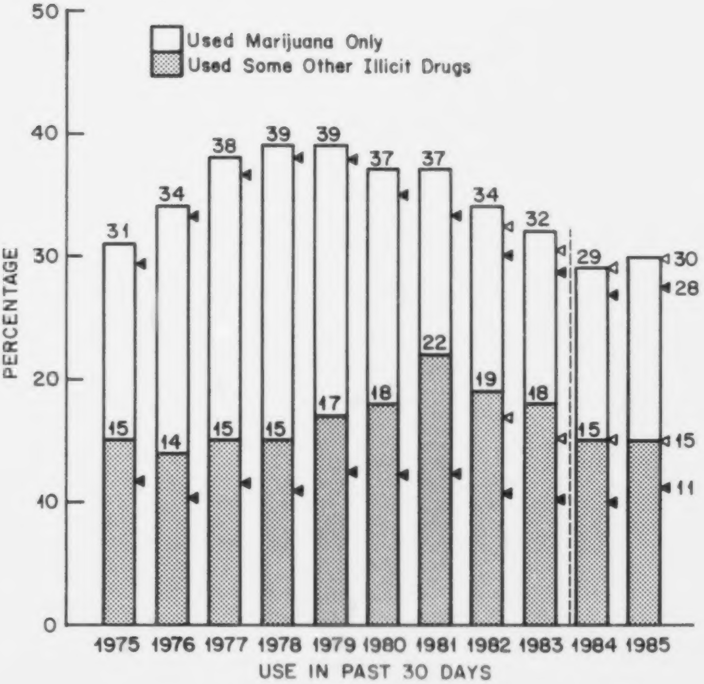
- Hallucinogen use (unadjusted for underreporting of PCP) declined some in the middle of the decade (from 11.2% in 1975 to 9.6% in 1978 on annual prevalence). It then leveled for several years before beginning another sustained decline. Between 1979, when the first adjusted figures were available, and 1985, there was a steady decline, with adjusted annual prevalence dropping from 12.8% in 1979 to 7.7% in 1985.

- LSD, one of the major drugs comprising the hallucinogen class, showed a decline from 1975 to 1977, followed by considerable stability through 1981. Since 1981, however, there has been a second period of decline, with annual prevalence falling from 6.5% in 1981 to 4.4% in 1985.

- The lifetime prevalence statistic for the specific hallucinogen PCP showed a continuation of the steady and very substantial decrease which began in 1979 when we first measured the use of this drug (lifetime prevalence has dropped from 12.8% in the class of 1979 to 4.9% in the class of 1984). The annual and 30-

FIGURE 8

Trends in Thirty-Day Prevalence of an Illicit Drug Use Index
All Seniors



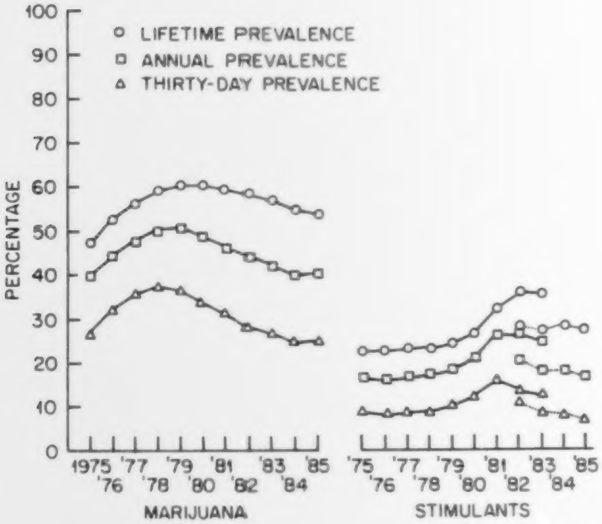
NOTES: Use of "some other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use which is not under a doctor's orders of other opiates, stimulants, sedatives, or tranquilizers.

◀ indicates the percentage which results if all stimulants are excluded from the definition of "illicit drugs." ◁ shows the percentage which results if only non-prescription stimulants are excluded.

The dashed vertical line indicates that after 1983 the shaded and open bars are defined by using the revised amphetamine questions.

FIGURE 9a

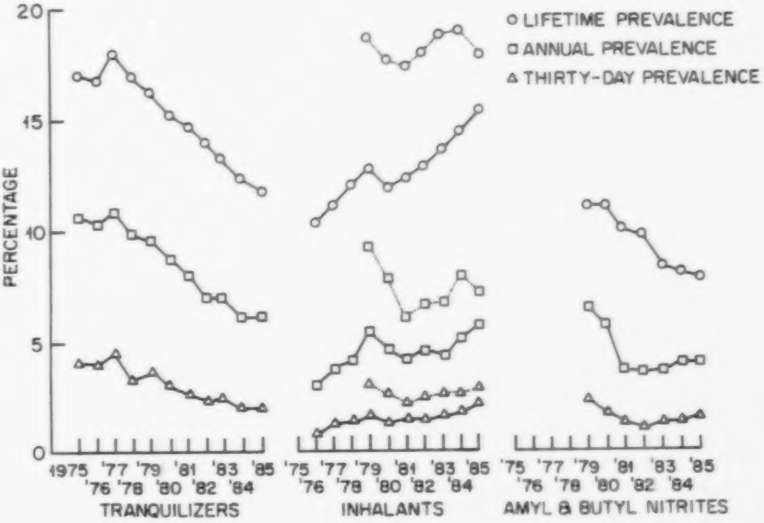
Trends in Lifetime, Annual, and Thirty-Day Prevalence of Sixteen Drugs



NOTE: The dotted lines connect percentages which result if non-prescription stimulants are excluded.

FIGURE 9b

Trends in Lifetime, Annual, and Thirty-Day Prevalence of Sixteen Drugs



NOTE: The dotted lines connect percentages which are adjusted for underreporting of amyl and butyl nitrites.

60

FIGURE 9c

Trends in Lifetime, Annual, and Thirty-Day Prevalence of Sixteen Drugs

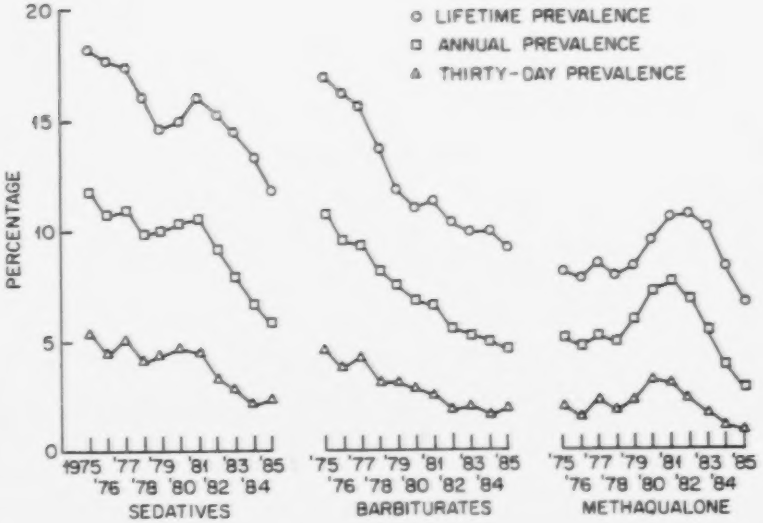
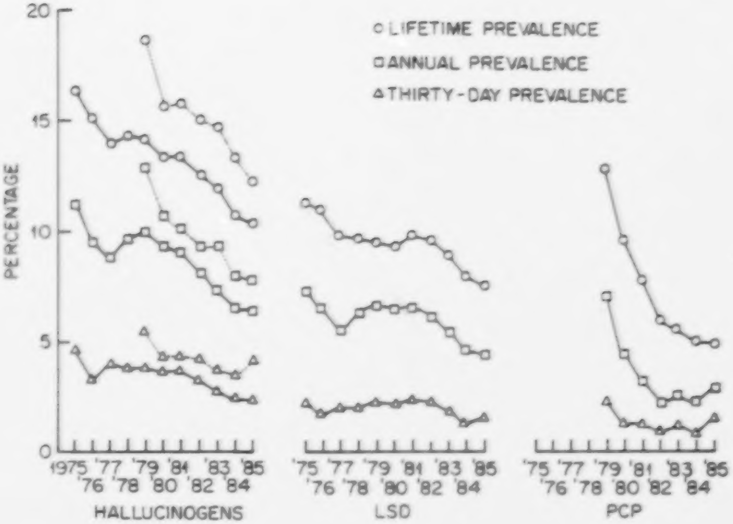


FIGURE 9d

Trends in Lifetime, Annual, and Thirty-Day Prevalence of Sixteen Drugs



NOTE: The dotted lines connect percentages which are adjusted for underreporting of PCP.

63

FIGURE 9e

Trends in Lifetime, Annual, and Thirty-Day Prevalence of Sixteen Drugs

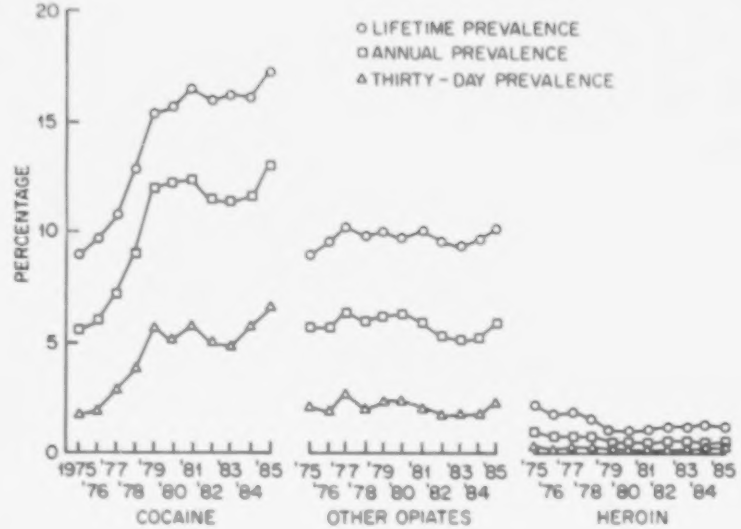


FIGURE 9f

Trends in Lifetime, Annual, and Thirty-Day Prevalence of Sixteen Drugs

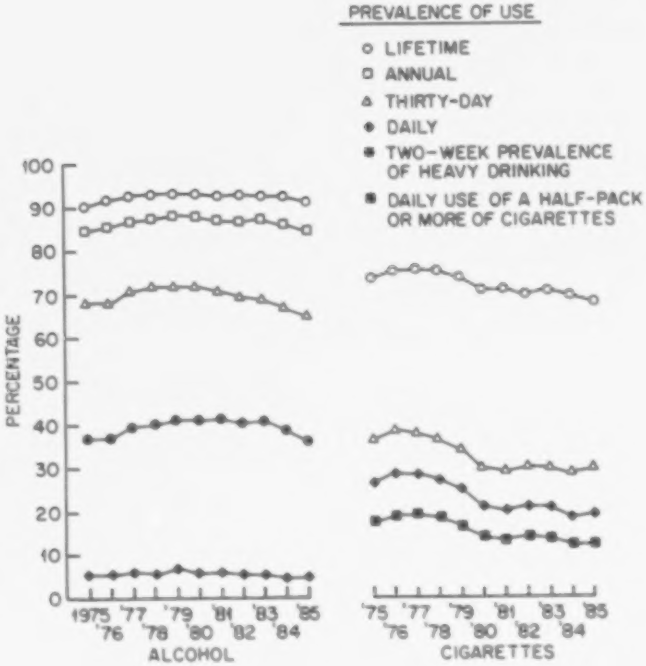
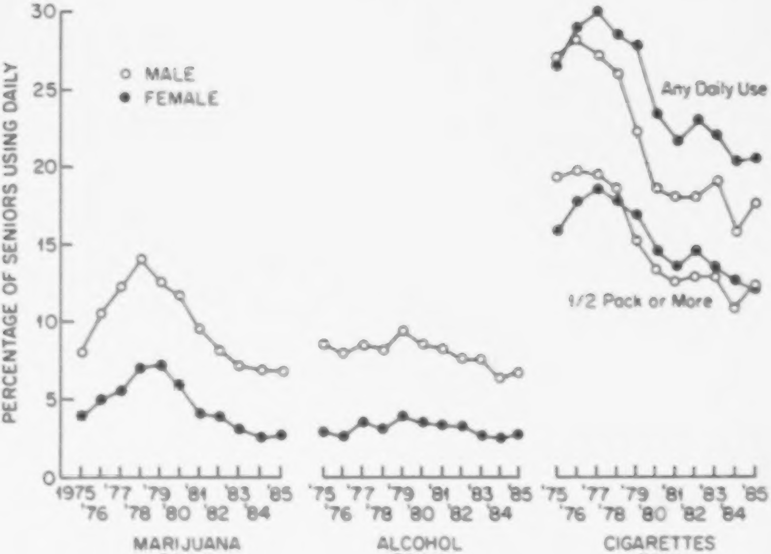


FIGURE 10

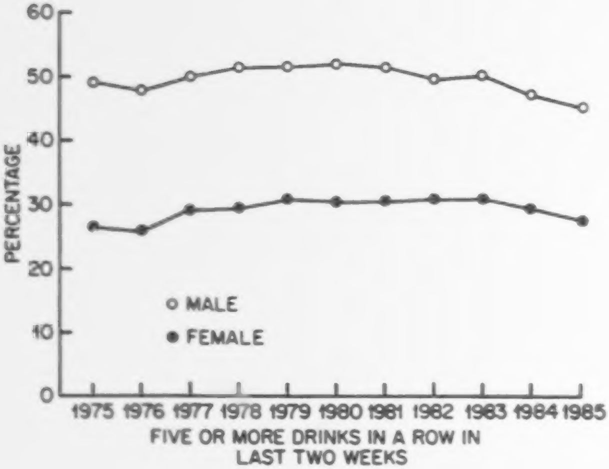
Trends in Thirty-Day Prevalence of Daily Use of Marijuana, Alcohol, and Cigarettes by Sex



NOTE: Daily use for alcohol and marijuana is defined as use on 20 or more occasions in the past thirty days. Daily use of cigarettes is defined as smoking one or more cigarettes per day in the past thirty days.

FIGURE 11

Trends in Two-Week Prevalence of Heavy Drinking by Sex



day statistics for PCP show slight rises in 1985 (neither is statistically significant), which offset a similarly slight drop the previous year.

- As can be seen from these varied patterns for the several classes of illicit drugs, while the overall proportion of seniors using any illicit drugs in their lifetime other than marijuana or amphetamines has changed rather little, the mix of drugs they are using has changed quite substantially.

- Turning to the licit drugs, between 1975 and 1978 or 1979 there was a small upward shift in the prevalence of alcohol use among seniors. To illustrate, between 1975 and 1979 the annual prevalence rate rose steadily from 85% to 88%, the monthly prevalence rose from 68% to 72%, and the daily prevalence rose from 5.7% to 6.9%. Since 1979, there has been virtually no drop in lifetime prevalence, but some drop for the more recent prevalence intervals: between 1979 and 1984, annual prevalence fell from 88% to 86%, monthly prevalence from 72% to 66%, and daily prevalence from 6.9% to 4.8%. Clearly the change in daily use is the most important of these shifts.

- There also had been some increase in the frequency of occasional heavy drinking in the last half of the 1970's. When asked whether they had taken five or more drinks in a row during the prior two weeks, 37% of the seniors in 1975 said they had. This proportion rose gradually to 41% by 1979, where it remained through 1983. In both 1984 and 1985, we observed drops of 2% in this troublesome statistic, which is again at 37%, exactly where it was in 1975. Thus, to answer a frequently asked question, there is no evidence that the currently observed drop in marijuana use is leading to a concomitant increase in alcohol use. If anything, there has been some parallel decline in daily alcohol use as well as in occasional heavy drinking.

- As for cigarette use, 1976 and 1977 appear to have been the peak years of smoking in this age group, as measured by lifetime, thirty-day, and daily prevalence. (Annual prevalence is not asked.) Over the four subsequent graduating classes, thirty-day prevalence dropped substantially from 38% in the class of 1977 to 29% in the class of 1981. More importantly, daily cigarette use dropped over that same interval from 29% to 20%, and daily use of half-pack-a-day or more from 19.4% to 13.5% between 1977 and 1981 (nearly a one-third decrease). In 1981 we reported that the decline appeared to be decelerating; in 1982 and 1983 it clearly had halted. There was a brief resumption of the earlier decline in 1984, with daily use falling from 21% to 19%, and daily use of half-pack-a-day dropping from 13.8% to 12.3%. However, in the Class of 1985 these measures rose slightly—daily use to 20% and half-pack-a-day to 12.5%. What seems most noteworthy is the lack of appreciable decline in the smoking rates since 1981, despite (a) the general decline which has occurred for most other drugs (including alcohol), (b) some rise in the perceived harmfulness and personal disapproval associated with smoking, and (c) a considerable amount of restrictive legislation which has been debated and enacted at state and local levels in the past several years.

Trends in Noncontinuation Rates

Table 12 shows how the user continuation rates observed for the various classes of drugs have changed over time. Recall that the noncontinuation rate, as used here, is defined as the percent of those who ever used the drug who did not use in the year prior to the survey.

- For most drugs there has been relatively little change in noncontinuation rates among those who have tried the drug at least once. There are some noticeable exceptions, however.

- Marijuana has shown some increase in the noncontinuation rates between 1979 (when it was 16%) and 1985 (when it was 25%). This corresponds to the greater drop in annual use than in lifetime use described earlier.

- The noncontinuation rate for cocaine decreased from 1976 (when it was 38%) to 1979 (when it was 22%), corresponding to the period of increase in the overall prevalence of use.

- There was considerably more noncontinuation of stimulant use in 1985 (40%) than in 1982 (when it was 27%), based on the revised question. Earlier data (based on the unrevised question), suggest that the change began after 1981.

- Much of the recent decline in sedative use is also accounted for by a changing rate of noncontinuation. For example, in the case of barbiturates the noncontinuation rate has risen since 1980, when it was around 38%, to 1985 when it was around 50%.

  Similarly, in 1980 24% of the seniors who ever used methaqualone did not use in the prior year, whereas the comparable statistic by 1985 was more than twice as high, at 58%.

- Tranquilizer users showed a steady, gradual increase in noncontinuation between 1975 and 1982, as the rate

TABLE 12
Trends in Noncontinuation Rates Among Seniors Who Used Drug in Lifetime

	Percent who did not use in past year										
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985
Marijuana/Hashish	15.4	15.7	15.6	15.2	15.9	19.1	22.5	24.5	25.8	27.1	25.1
Inhalants	NA	70.9	66.7	65.8	57.5	61.3	66.7	64.8	68.4	64.6	63.0
Adjusted	NA	NA	NA	NA	50.8	55.7	65.5	63.3	64.4	58.4	59.8
Nitrites	NA	NA	NA	NA	41.4	48.6	63.4	63.3	57.1	50.6	49.4
Hallucinogens	31.3	37.7	36.7	32.9	29.8	30.1	32.3	35.2	38.7	39.3	38.8
Adjusted	NA	NA	NA	NA	31.2	32.5	35.7	38.0	36.7	40.6	36.9
LSD	36.3	41.8	43.9	35.1	30.5	30.1	33.7	36.5	39.3	41.3	41.3
PCP	NA	NA	NA	NA	45.3	54.2	59.0	63.3	53.6	54.0	40.8
Cocaine	37.8	38.1	33.3	30.2	22.1	21.7	24.8	28.1	29.6	28.0	24.3
Heroin	54.5	55.6	55.6	50.0	54.5	54.5	54.5	50.0	50.0	61.5	50.0
Other Opiates	36.7	40.6	37.9	39.4	38.6	35.7	41.6	44.8	45.7	46.4	42.2
Stimulants	27.4	30.1	29.1	25.3	24.4	21.2	19.3	26.7	30.5	NA	NA
Revised	NA	NA	NA	NA	NA	NA	NA	27.2	33.5	36.6	39.7
Sedatives	35.7	39.5	37.9	38.1	32.2	30.9	34.4	40.1	45.1	50.4	50.8
Barbiturates	36.7	40.7	40.4	40.9	36.4	38.2	41.6	46.6	47.5	50.5	50.0
Methaqualone	37.0	39.7	38.8	38.0	28.9	24.2	28.3	36.4	46.5	54.2	58.2
Tranquilizers	37.6	38.7	40.0	41.8	41.1	42.8	45.6	50.0	48.1	50.8	48.7
Alcohol	6.2	6.7	5.9	5.8	5.3	5.7	6.0	6.5	5.7	7.1	7.2
Cigarettes[a]	16.0	16.7	16.2	17.9	19.6	21.4	20.8	19.1	18.6	18.5	15.9

[a] Percent of regular smokers (ever) who did not smoke at all in the past 30 days.

TABLE 13

Trends in Noncontinuation Rates Among Seniors Who Used Drug Ten or More Times in Lifetime

	Percent who did not use in past year										
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985
Marijuana/Hashish	4.0	4.0	4.1	3.7	4.6	5.4	7.2	7.6	8.3	8.8	7.8
Inhalants	NA	48.9	42.6	34.6	23.8	25.2	23.8	27.2	23.1	23.4	25.8
Nitrites*											
Hallucinogens	10.8	16.1	15.2	10.8	8.1	8.4	7.7	7.5	13.0	14.1	12.2
LSD	15.2	17.3	18.0	12.2	7.4	6.4	7.1	7.5	15.3	12.1	12.6
PCP*											
Cocaine	7.7	8.2	6.2	3.8	3.1	3.1	3.1	2.9	6.2	3.1	2.5
Heroin*											
Other Opiates	9.6	11.6	9.7	9.9	8.7	10.8	10.1	13.5	16.4	15.4	12.2
Stimulants	8.0	9.8	7.6	7.4	6.1	4.1	4.4	6.4	7.5	NA	NA
Revised	NA	NA	NA	NA	NA	NA	NA	8.4	10.7	12.7	17.5
Sedatives	13.6	16.2	12.4	12.8	8.6	10.5	7.6	8.6	16.4	20.8	23.6
Barbiturates	13.4	16.5	12.9	13.5	11.2	11.7	8.9	12.6	17.7	22.8	20.6
Methaqualone	13.5	15.9	11.9	13.1	6.1	6.0	4.9	8.0	16.3	23.3	26.7
Tranquilizers	12.0	13.0	11.1	14.4	14.1	14.3	16.3	16.0	14.8	18.8	19.2
Alcohol	0.6	0.8	0.6	0.9	0.7	0.8	1.0	0.9	0.9	1.1	1.2

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*The cell entries in these rows were omitted because they were based on fewer than 100 seniors who used ten or more times. All other cells contain more than 100 cases.

rose from 37% to 50%. Since 1982 there has not been any further systematic change, however.

- Table 13 provides noncontinuation rates for seniors who were more established users—that is, for those who report having used the drug ten or more times in their life. It shows that noncontinuation is far less likely among such heavier users than among all users of a given drug. Further, while the trends in noncontinuation mentioned above for marijuana, stimulants, barbiturates, methaqualone, and tranquilizers, are all similar to trends observed in the noncontinuation rates for heavier users of those same drugs, the percentage fluctuations tend to be considerably smaller among the heavier users.

Trend Comparisons for Important Subgroups

Sex Differences in Trends

- Most of the sex differences mentioned earlier for individual classes of drugs have remained relatively unchanged over the past ten years—that is, any trends in overall use have occurred about equally among males and females. There are, however, a few exceptions (data not shown).

- Since 1977, the small sex difference involving tranquilizer use (males this age had used them less frequently than females) has disappeared for lifetime prevalence and actually reversed for annual and 30-day prevalence, due to a faster decline among females.

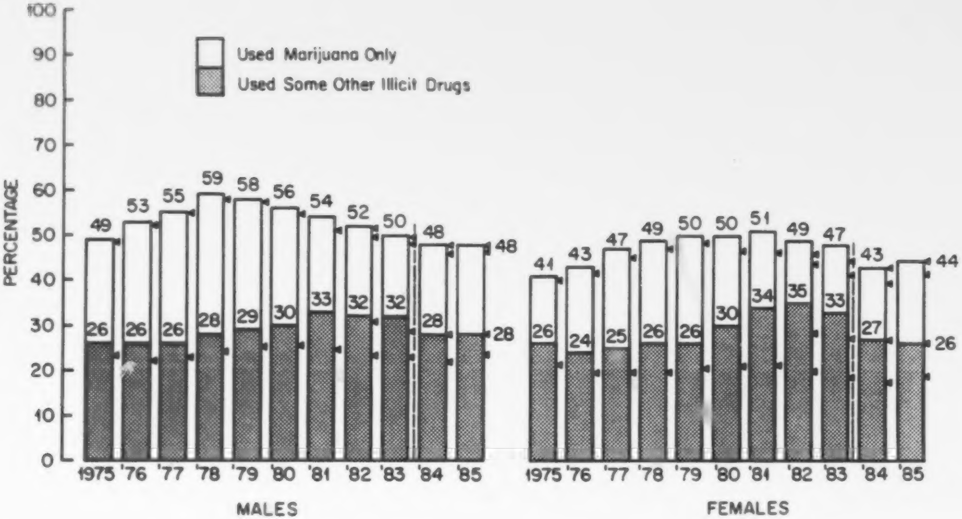
- The ratio of male-female prevalence rates in cocaine use, which was rather large in the mid-1970's, diminished somewhat in the early 1980's. Although the differences have lessened, males still use more frequently than females.

- Regarding stimulant use, a sex difference emerged in 1981 and 1982 using the original version of the question; but the revised question introduced in 1982 showed no sex difference, suggesting that over-the-counter diet pills accounted for females showing higher use in those two years. In 1985, with the revised version of the question, females show slightly higher rates of use of stimulants due to their more frequent use of amphetamines for the purpose of weight loss.

- An examination of the trends in the proportion of each sex using any illicit drug in the prior year (see Figure 12) shows that use among males rose between 1975 and

FIGURE 12

Trends in Annual Prevalence of an Illicit Drug Use Index by Sex



NOTE: See Figure 8 for relevant footnotes.

1978, and then declined steadily until 1985 (from 59% in 1978 to 48% in 1985). Use among females increased from 1975 (41%) until 1981 (51%) and then dropped until 1985 (44%). However, if amphetamine use is deleted from the statistics (see ◄ notations in Figure 12), female use peaked earlier (in 1979) and then declined as well. (Note that the declines for both males and females were attributable to the declining marijuana use rates.) This year, the declines halted for both sexes, based on the annual use statistics.

- Regarding the apparent parity between the sexes in the levels and trends in the use of illicit drugs other than marijuana, it can be seen in Figure 12 that, when amphetamine use is excluded from the calculations, somewhat differential levels emerge for males vs. females but the trends tend to remain fairly parallel.

- The sex differences in alcohol use have narrowed slightly since 1975. For example, the thirty-day prevalence rates for males and females differed by 12.8% in 1975 (75.0% vs. 62.2% respectively), but that difference was down to 7.7% by 1985 (69.8% vs. 62.1%). And, although there still remain substantial sex differences in daily use and occasions of heavy drinking, there has been some narrowing of the differences there, as well (Figure 11). For example, between 1975 and 1985 the proportion of males admitting to having five drinks in a row during the prior two weeks showed a net decrease of 3.7% (from 49.0% to 45.3%), whereas a net increase of 1.8% occurred for females (from 26.4% to 28.2%).* It should be noted that both sexes showed slight decreases this year in this important statistic.

- Although males are far more likely than females to have five or more drinks in a row during the prior two weeks (48% vs. 28%), there is practically no difference in the proportion of them who had at least one drink during that same interval (44% vs. 42%). Thus, it is the propensity to drink a lot per occasion that differs between male and female high school seniors, not the propensity to drink at all.

- On one of the five questionnaire forms used in the study, respondents are asked separately about their use of beer, wine, and hard liquor. The answers to these questions reveal that it is primarily a differential rate of beer consumption that accounts for the large sex differences in occasions of heavy drinking; 43% of 1985 senior males report having five or more beers in a row during the prior two weeks vs. 22% of the females. In contrast, males are only slightly more likely than females to report having 5 or more drinks of hard liquor (21% vs. 18% for females) and they are just about equivalent with respect to heavy use of wine (12.9% vs. 12.5% for females). This pattern—a large sex difference in heavy use of beer, a much smaller difference in heavy use of hard liquor, and very little difference in heavy use of wine—has been present throughout the study, with little systematic trending.

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*It is worth noting that the same number of drinks produces substantially greater impact on the blood alcohol level of the average female than the average male, because of sex differences in body weight. Thus, sex differences in frequency of actually getting drunk may not be as great as the binge drinking statistics would indicate, since they are based on a fixed number of drinks.

- Regarding cigarette smoking, we observed in 1977 that females for the first time caught up to males at the half-a-pack per day smoking level (Figure 10). Then, between 1977 and 1981, both sexes showed a decline in the prevalence of such smoking; but use among males dropped more, resulting in a reversal of the sex differences. As of 1985, the proportions of males and females smoking at least a half-pack-a-day differ rather little (12.3% for males, 12.0% for females); and at the pack-a-day or more level, there are slightly more males (7.0%) than females (6.2%). However, at less frequent levels of smoking, there is a somewhat larger sex difference, since there are more occasional smokers among females than among males. For example, in 1985, 31% of the females report smoking at least once in the prior 30 days, vs. only 28% of the males. This year's increase in smoking among all seniors, which was not statistically significant, occurred entirely among males.

Trend Differences Related to College Plans

- Both college-bound and noncollege-bound students have been showing fairly parallel trends in overall illicit drug use over the last several years (see Figure 13).*

- Changes in use of the specific drug classes have also been generally quite parallel for the two groups since 1976, with only minor exceptions.

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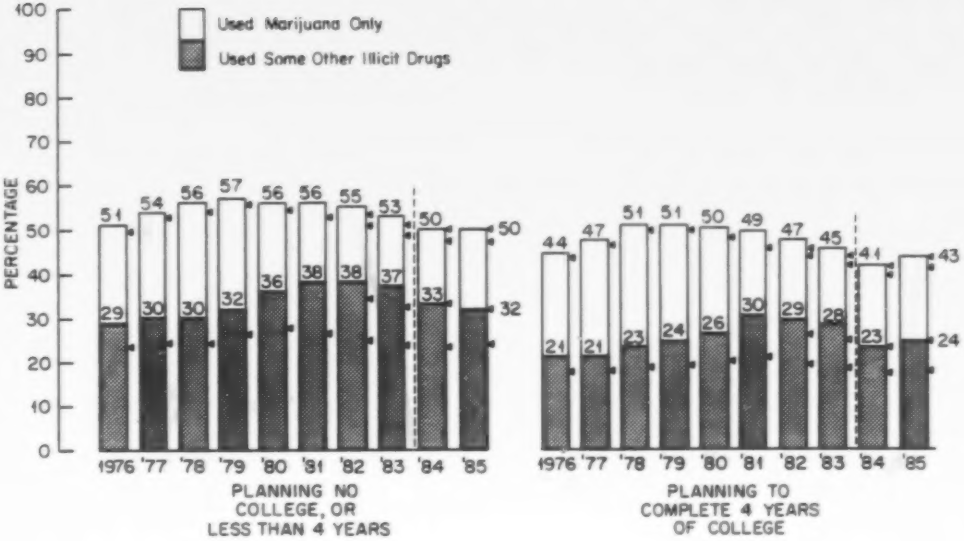
*Because of excessive missing data in 1975 on the variable measuring college plans, group comparisons are not presented for that year.

FIGURE 13

Trends in Annual Prevalence of an Illicit Drug Use Index
by College Plans



NOTE: See Figure 8 for relevant footnotes.

- One such exception is that the 1985 increase in current use of opiates other than heroin occurred primarily among the college-bound.

- On the other hand, nearly all of the 1985 increase in smoking rates occurred among the noncollege-bound.

Regional Differences in Trends

- In terms of the proportion of seniors using any illicit drug during the year, all four regions of the country reached their peaks in 1978 or 1979 (Figure 14), and generally have been falling since then. In 1985, both the South and the Northeast showed patterns of continuing decline. However, the North Central and West showed slight reversals; in the North Central the rise is due in part to statistically significant increases in marijuana, cocaine, and other opiates; in the West it is due to a rise in use of other opiates.

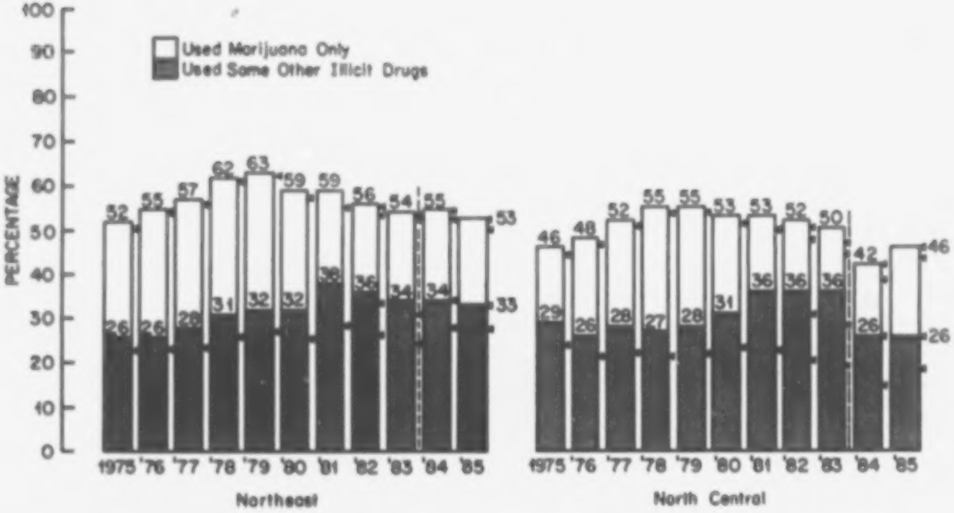
- As noted earlier, a major factor in the rise of illicit drug use other than marijuana had been an increase in reported amphetamine use. Such a rise appeared in all four regions; however, the rise from 1978 to 1981 was only 6% in the South, whereas in the other regions the percentages all had risen between 9% and 12%. In essence, the South has been least affected by both the rise and the fall in reported amphetamine use.

- When amphetamine use is excluded, as shown by the arrow (◄) in Figure 14, a rather different picture appears for regional trends during the late seventies and early eighties than the picture given by the shaded bars (which include all reported amphetamine use). Use of illicits other than marijuana and amphetamines actually started to decline in the South and North Central in 1981—both regions having had fairly level rates of use prior to that. Rates in the West and the Northeast did not begin their decline until 1982, after a period of some increase in student involvement with such drugs (but not as great an increase as the "uncorrected" figures would suggest). In 1985, there was little further change in the Northeast and West; but due to significant changes in opiates other than heroin and cocaine use, the North Central showed an increase in this statistic, and the South showed a further decline due to significant changes in hallucinogen (adjusted), sedative, and methaqualone use.

- Over the longer term cocaine use has shown quite different trends in the four regions of the country (see Figure 15 for differences in lifetime prevalence trends). In the mid seventies, there was relatively little regional variation in cocaine use. Then, large

FIGURE 14

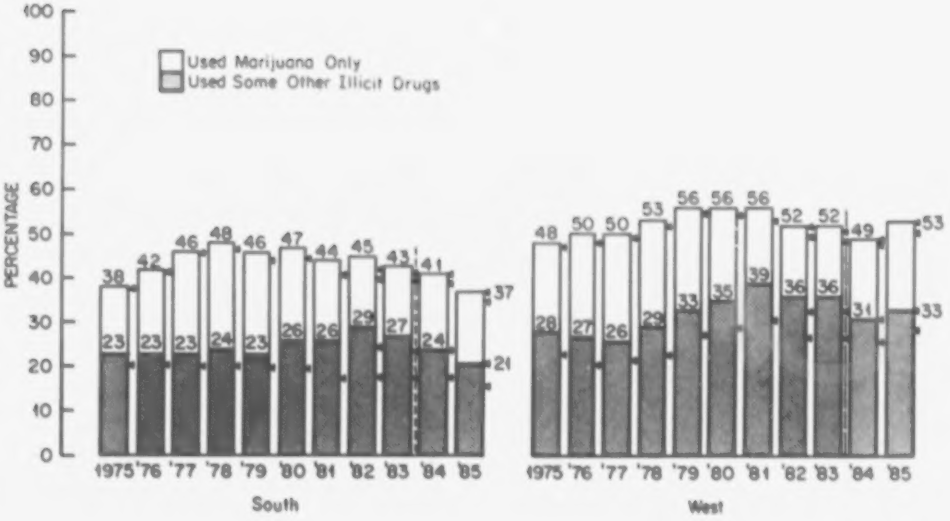
Trends in Annual Prevalence of an Illicit Drug Use Index
by Region of the Country



NOTE: See Figure 8 for relevant footnotes.

FIGURE 14 (cont.)

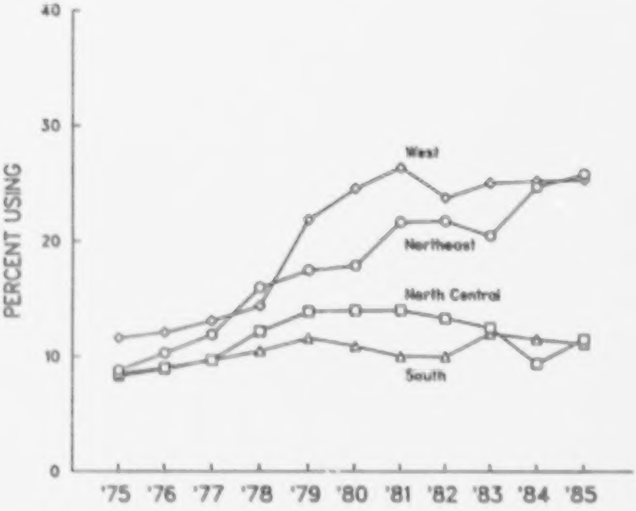
Trends in Annual Prevalence of an Illicit Drug Use Index
by Region of the Country



NOTE: See Figure 8 for relevant footnotes.

FIGURE 15

Trends in Lifetime Prevalence of Cocaine Use
by Region of the Country



regional differences emerged so that by 1981 annual use had roughly tripled in the West and Northeast, nearly doubled in the North Central, and increased "only" by about 30% in the South. Since 1981, there has been some further increase in the Northeast (occurring specifically in 1984 and 1985). The West showed a drop in 1982 but some gradual increase since, while the North Central showed a gradual decrease after 1980 until this year, when there was a significant increase. There has been little change in the South since 1979. The net effect has been that there have remained very substantial regional differences in cocaine use since around 1980, with the West and Northeast now showing annual prevalence rates near 20% vs. around 8% for the South and North Central.

- Between 1975 and 1981 sizeable regional differences in hallucinogen use emerged, as use in the South dropped appreciably. In 1981, both the North Central and the West had annual rates that were about two and one-half times higher than the South (10.3%, 10.4%, and 4.1%, respectively), and the Northeast was three times as high (12.9%). After 1981, hallucinogen use dropped appreciably in all three non-Southern regions (by 3-4%), narrowing these differences in absolute terms, though the North Central and West now have annual rates twice that of the South with the Northeast still three times as high. Unlike the other hallucinogens, which decreased in all regions between 1981 and 1985, recent use of PCP showed a different pattern, increasing in both the Northeast and West, while declining in both the North Central and South.

- The remaining drugs (i.e., alcohol, cigarettes, marijuana, heroin, other opiates, barbiturates, methaqualone, tranquilizers, and inhalants) show rather little regional variation in trends.

Trend Differences Related to Population Density

- There appears to have been a peaking in 1979 in the proportions using any illicit drug in all three levels of community size (Figure 16). Although the smaller metropolitan areas and the non-metropolitan areas never caught up completely with their larger counterparts, they did narrow the gap some between 1975 and 1979. Most of that narrowing was due to changing levels of marijuana use, and most of it occurred prior to 1978.

  Since 1979, there had been a fairly steady decrease in all three groupings on community size—until 1985, when the metropolitan areas remained level and the non-metropolitan areas showed a slight rise.

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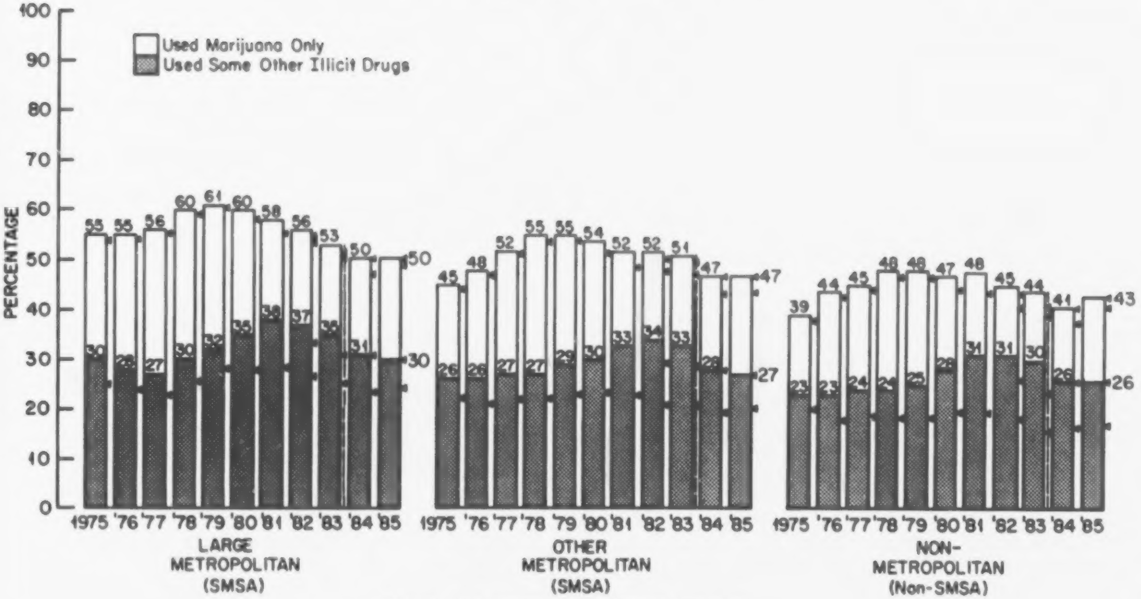
FIGURE 16

Trends in Annual Prevalence of an Illicit Drug Use Index
by Population Density



NOTE: See Figure 8 for relevant footnotes.

- The overall proportion involved in illicit drugs other than marijuana also has peaked in communities of all sizes, but not until 1981 or 1982. Up to 1981, the proportions reporting the use of some illicit drug other than marijuana in the last 12 months had been increasing continuously (over a four-year period in the very large cities, and over a three-year period in the smaller metropolitan and non-metropolitan areas). As can be seen by the special notations in Figure 16, almost all of this increase is attributable to the rise in reported amphetamine use (which likely is artifactual in part). The 1983 figures showed decreases of one to two percent in all three levels of community size in illicit drug use other than marijuana (revised version). The decline continued in 1984 and 1985 in the metropolitan areas, but the non-metropolitan areas were stable.

- There were statistically significant decreases in annual and monthly amphetamine use between 1984 and 1985 among seniors in the large cities. All three areas have shown declines in recent use since the amphetamine measures were revised in 1982. (Data not shown.)

- The increase in cocaine use, although dramatic at all levels of urbanicity between 1976 and 1979, was clearly greatest in the large cities. Between 1980 and 1984, use was fairly stable in all groupings, and in 1985 they all showed a rise in use. (Data not shown.)

- There is evidence of a decline in current alcohol use in the large cities in recent years. For example, thirty-day prevalence in the large cities is down by 11%, from 78% in 1980 to 67% in 1985; during the same interval, the smaller metropolitan areas decreased 6% (from 71% to 65%), and the non-metropolitan areas dropped 3% (from 69% to 66%). Similarly, daily use decreased between 1980 and 1985 by 1.8% in the large cities (7.1% to 5.3%), while the smaller cities decreased by 0.3% (5.4% to 5.1%) and non-metropolitan areas decreased by 1.3% (6.1% to 4.8%). And occasional heavy drinking decreased by 7% (from 45% to 38%) in the large cities, compared to a 3.5% decrease in other cities (38.9% to 35.4%) and a 3.8% drop in non-metropolitan areas (41.4% to 37.6%). These differential shifts result in less variation among the three levels of urbanicity in 1984 and 1985 than there had been several years earlier.

- Differences related to community size have also narrowed in the cases of LSD (since 1981) due to a greater amount of decrease in the large cities and other cities than in the non-metropolitan areas (which started out considerably lower). A similar thing appeared to be happening for PCP, as well, until this year when reported use in the largest cities rose while use in the other types of communities remained unchanged.

- Opiates other than heroin were used by significantly more seniors in the smaller metropolitan areas, in 1985 compared to 1984; for example, annual use went from 5.1% to 6.4%.

- The remaining drugs show little variation in trends related to population density.

USE AT EARLIER GRADE LEVELS

In two of the five questionnaire forms used in the study, respondents are asked to indicate the grade in which they were enrolled when they first tried each class of drugs. Graphic presentations on a drug-by-drug basis of the trends for earlier grade levels and of the changing age-at-onset curves for the various graduating classes are contained in the large 1978, 1981, and 1983 reports from the study (cited earlier). In the present report, only some of these figures are included. Table 14 gives the percent of the 1985 seniors who first tried each drug at each of the earlier grade levels.

Incidence of Use by Grade Level

- For marijuana, alcohol, and cigarettes, most of the initial experiences took place before high school. For example, regular daily cigarette smoking was begun by 13% prior to tenth grade vs. only an additional 9% in high school (i.e., in grades ten through twelve). The figures for initial use of alcohol are 56% prior to and 37% during high school; and for marijuana, 28% prior to and 26% during high school (see Table 14). Also, for the use of inhalants (unadjusted) more than half (8.3%) was initiated before tenth grade (vs. 7.0% after).

  For most of the illicit drugs, between 40 and 50% of the eventual users initiated use prior to 10th grade; methaqualone, barbiturates, heroin, PCP, amphetamines, and tranquilizers fall in this category.

  Among eventual users of hallucinogens, LSD (specifically), nitrites, and opiates other than heroin, still a substantial minority—about one-third—initiate use prior to tenth grade.

- Cocaine presents a contrasting picture to nearly all other drugs in that initiation rates are highest in the last two years of high school; less than 20% of eventual users initiated use prior to tenth grade. Furthermore, our follow-ups of earlier graduating classes show that initiation rates remain very high in the years after high school.

Trends in Use at Earlier Grade Levels

- Using the retrospective data provided by members of each senior class concerning their grade at first use, it is possible to reconstruct lifetime prevalence curves at

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TABLE 14

Grade of First Use for Sixteen Types of Drugs, Class of 1985

(Entries are percentages)

Grade in which drug was first used:	Marijuana	Inhalants[a]	Amyl/Butyl Nitrites	Hallucinogens[a]	LSD	PCP	Cocaine	Heroin	Other Opiates	Stimulants[b] (adjusted)	Sedatives	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Cigarettes (Daily)
6th	3.5	2.1	0.3	0.3	0.1	0.5	0.2	0.2	0.4	0.7	0.8	0.6	0.3	0.6	9.7	2.6
7–8th	12.0	3.8	1.2	0.9	0.6	0.6	0.8	0.2	1.0	3.9	2.1	1.7	1.1	1.6	23.0	5.2
9th	12.5	2.4	1.1	2.6	1.8	1.2	2.2	0.2	2.2	7.5	3.0	2.2	2.0	2.8	22.8	4.9
10th	12.1	2.3	1.5	2.8	2.0	0.9	3.8	0.3	2.7	6.7	3.5	2.8	2.1	2.8	18.5	4.2
11th	8.7	3.0	2.2	2.2	1.8	1.0	5.5	0.2	2.0	4.7	1.8	1.3	1.0	2.6	11.8	3.6
12th	5.4	1.7	1.6	1.5	1.1	0.6	4.7	0.2	2.0	2.6	0.6	0.7	0.3	1.6	6.4	1.7
Never used	45.8	84.6	92.1	89.7	92.5	95.1	82.7	98.8	89.8	73.8	88.2	90.8	93.3	88.1	7.8	77.9

NOTE: This question was asked in two of the five forms (N = approximately 5700), except for inhalants, PCP, and the nitrites which were asked about in only one form (N = approximately 2800).

[a] Unadjusted for known underreporting of certain drugs. See text for details.

[b] Adjusted for the inappropriate reporting of non-prescription stimulants.

lower grade levels during the years when each class was at those various grade levels. Obviously, data from eventual dropouts from school are not included in any of the curves. Figures 17a through 17r show the reconstructed lifetime prevalence curves for earlier grade levels for a number of drugs.

- Figure 17a provides the trends at each grade level for lifetime use of any illicit drug. It shows that for all grade levels there was a continuous increase in illicit drug involvement through the seventies. The increase is fortunately quite small for use prior to sixth grade; only 1.1% of the class of 1975 reported having used an illicit drug before 6th grade (which was in 1969 for that class), but the figure has increased modestly, and for the class of 1985 is at 4.3% (which was in 1979 for that class). The lines for the other grade levels all show much steeper upward slopes, indicating that the more recent graduating classes had initiated illicit drug use earlier than the less recent classes. For example, about 45% of the class of 1985 had used some illicit drug by the end of grade 10, compared to 37% of the class of 1975.

- Beginning in 1980, though, there was a leveling off at the high school level (grades 10, 11, and 12) in the proportion becoming involved in illicit drugs. The leveling in the lower grades came about a year earlier.

- Most of the increase in any illicit drug use was due to increasing proportions using marijuana. We know this from the results in Figure 17b showing trends for each grade level in the proportion having used any illicit drug other than marijuana in their lifetime. Compared to Figure 17d for marijuana use, these trend lines are relatively flat throughout the seventies and, if anything, began to taper off among ninth and tenth graders between 1975 and 1977. The biggest cause of the increases in these curves from 1978 to 1981 was the rise in reports of amphetamine use. As noted earlier, we suspect that at least some of this rise is artifactual. If amphetamine use is removed from the calculations, even greater stability is shown in the proportion using illicits other than marijuana or amphetamines. (See Figure 17c.)

- As can be seen in Figure 17d, for the years covered across the decade of the 70's, marijuana use had been rising steadily at all grade levels down through the seventh-eighth grades. Beginning in 1980, marijuana involvement began to decline for grades 9 through 12. Junior high school use reached an asymptote by the end of the seventies, as well.

There was also some small increase in marijuana use during the 1970's at the elementary level (that is, prior to seventh grade). Use by sixth grade or lower rose gradually from 0.6% for the class of 1975 (who were sixth graders in 1968-69) to a peak of 4.3% in the class of 1984 (who were sixth graders in 1977-78). (It appears to start dropping thereafter.) The three most recent national household surveys by NIDA suggest that this relatively low level of use among this age group continues to hold true: the proportion of 12 to 13 year olds reporting any experience with marijuana was 6% in 1971, and was constant at 8% in 1977, 1979, and 1982. Presumably sixth graders would have even lower absolute rates, since the average age of sixth graders is less than twelve.*

- Cocaine use at earlier grade levels is given in Figure 17e. One clear contrast to the marijuana pattern is that most initiation into cocaine use takes place in the last two years of high school (rather than earlier, as is the case for marijuana). Further, most of the increase in cocaine experience between 1976 and 1980 occurred in the 11th and 12th grades, not below. After 1980, experience with cocaine generally remained level until 1984 (for juniors) and 1985 (for seniors), when an upturn can be observed.

- The lifetime prevalence statistics for stimulants peaked briefly for grade levels 9 through 12 during the mid 70's. (See Figure 17f.) However, it showed a sharp rise in the late 70's at virtually all grade levels. As has been stated repeatedly, we believe that some—perhaps most—of this recent upturn is artifactual in the sense that non-prescription stimulants account for much of it. However, regardless of what accounts for it, there was a clear upward secular trend—that is, one derived across all cohorts and grade levels—beginning in 1979. The unadjusted data from the class of 1983 give the first indication of a reversal of this trend. The adjusted data from the classes of 1982 through 1985 suggest that the use of stimulants leveled around 1982. (In fact, as noted earlier, current use among twelfth graders has actually fallen appreciably since 1982.)

- Lifetime prevalence of hallucinogen use (unadjusted for underreporting of PCP) began declining among students at most grade levels in the mid-1970's (Figure 17g), and this gradual decline continued in the upper grades. However, it appears that a leveling occurred after 1979 in the lower grades, due almost entirely to the trends in LSD use. (The trend curves for LSD (not shown) are extremely similar in shape, though lower in level, of course.)

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*See National Survey on Drug Abuse: Main Findings 1982 by J.D. Miller et al. Rockville, MD: National Institute on Drug Abuse, 1983.

- While there is less trend data for PCP, since questions about grade of first use of PCP were not included until 1979, some interesting results emerge. It appears that a sharp downturn began around 1979 (see Figure 17h), and the trend in lifetime experience continues down, though much more gradually in recent years. If the hallucinogen figure (17g) were adjusted for underreporting of PCP use, it would be showing even more downturn in recent years.

- Questions about age at first use for inhalants (unadjusted for the nitrites) have been asked only since 1978. The retrospective trend curves (Figure 17i) suggest that during the mid 1970's, experience with inhalants decreased slightly for most grade levels and then began to rise again. For the upper grade levels there has been a continued gradual rise since 1980 in lifetime prevalence, whereas the curves have been more uneven in the lower grades.

- Since grade-at-first-use data have been gathered for the nitrites beginning in 1979, only limited retrospective data exist (Figure 17j). These do not show the recent increase observed for the overall inhalant category. In fact, they show a gradual decline in experience with the nitrites, beginning around 1980.

- Figure 17k shows that the lifetime prevalence of sedative use, like stimulant use, began declining for all grade levels in the mid-70's, then showed some reversal in the late 70's. (Recall that annual prevalence observed for seniors had been declining steadily from 1975 to 1979.) As the graphs for the two subclasses of sedatives—barbiturates and methaqualone—show, the trend lines have been quite different for them at earlier grade levels as well as in twelfth grade (see Figures 17l and 17m). Since about 1974 or 1975, lifetime prevalence of barbiturate use had fallen off sharply at all grade levels for all classes until the late 70's; since then there has been little change (although current use continued to decline among seniors until 1984, at least).

  During the mid-70's methaqualone use started to fall off at about the same time as barbiturate use in nearly all grade levels, but dropped rather little and then flattened. Between 1978 and 1981 there was a fair resurgence in use in nearly all grade levels; but since 1982 there has been a sharp decline.

- Lifetime prevalence of tranquilizer use (Figure 17n) also began to decline at all grade levels in the mid-70's. Overall, it would appear that the tranquilizer trend lines have been following a similar course to that of barbiturates. So far, the curves are different only in that tranquilizer use continued a steady decline among eleventh and twelfth graders, while barbiturate use did not.

- Though a little difficult to see, the heroin lifetime prevalence figures for grades 9 through 12 all began declining in the mid-1970's, then leveled, and show no evidence of reversal as yet (Figure 17o).

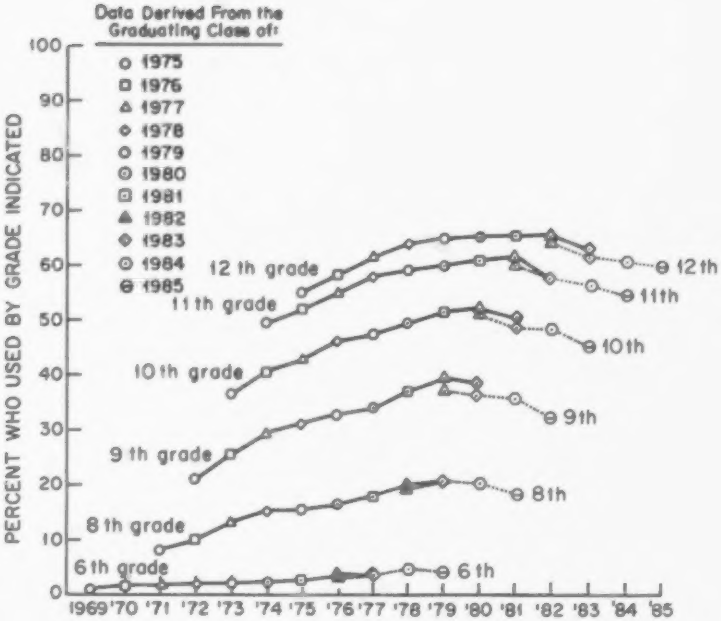
- The lifetime prevalence of use of opiates other than heroin has remained quite flat at all grade levels since the mid-70's (Figure 17p).

- Figure 17q presents the lifetime prevalence curves for cigarette smoking on a daily basis. It shows dramatically that initiation to daily smoking was beginning to peak at the lower grade levels in the early to mid-1970's. This peaking did not become apparent among high school seniors until a few years later. In essence, these changes reflect in large part cohort effects—changes which show up consistently across the age band for certain class cohorts. Because of the highly addictive nature of nicotine, this is a type of drug-using behavior in which one would expect to observe enduring differences between cohorts if any are observed at a formative age. The classes of 1982 and 1983 showed some leveling of the previous decline, but the classes of 1984 and 1985 showed an encouraging resumption of the decline while they were in earlier grade levels.

- The curves for lifetime prevalence of alcohol at higher grade (11-12) levels (Figure 17r) are very flat, reflecting little change over a decade. At the 7-10th grade levels, the curves show slight upward slopes in the early 1970's, indicating that compared to the older cohorts (prior to the class of 1978), more recent classes initiated use at earlier ages. For example, 50% of the class of 1975 first used alcohol in ninth grade or earlier, compared to 55 or 56% for all classes since 1978. These changes are relatively small, however. (Females account for most of the change; 42% of females in the class of 1975 first used alcohol prior to tenth grade, compared to 51 to 52% for all classes since 1981.)

FIGURE 17a

Use of Any Illicit Drug: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors



NOTE: The dotted lines connect percentages which result if non-prescription stimulants are excluded.

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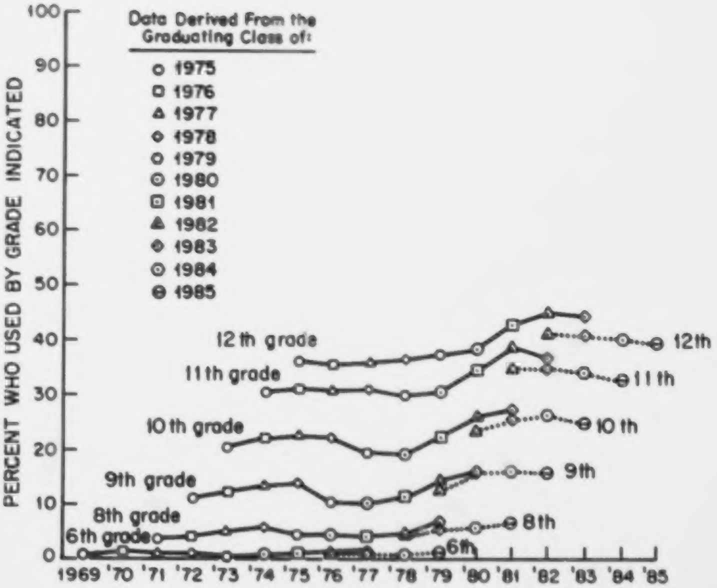
FIGURE 17b

Use of Any Illicit Drug Other Than Marijuana: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Seniors



NOTE: The dotted lines connect percentages which result if non-prescription stimulants are excluded.

FIGURE 17c

Use of Any Illicit Drug Other Than Marijuana or Amphetamines: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Seniors

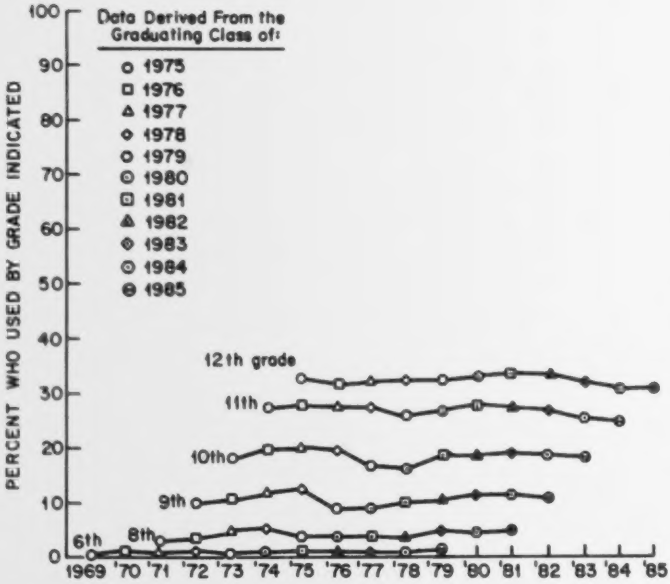


FIGURE 17d

Marijuana: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

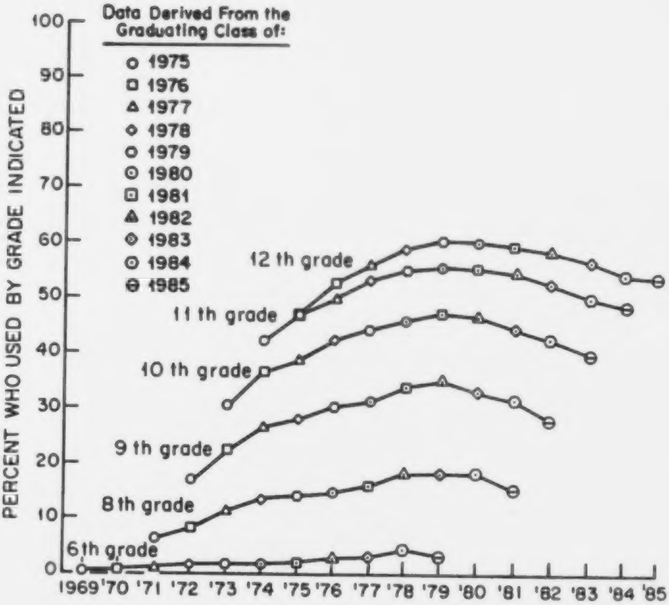


FIGURE 17e

Cocaine: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

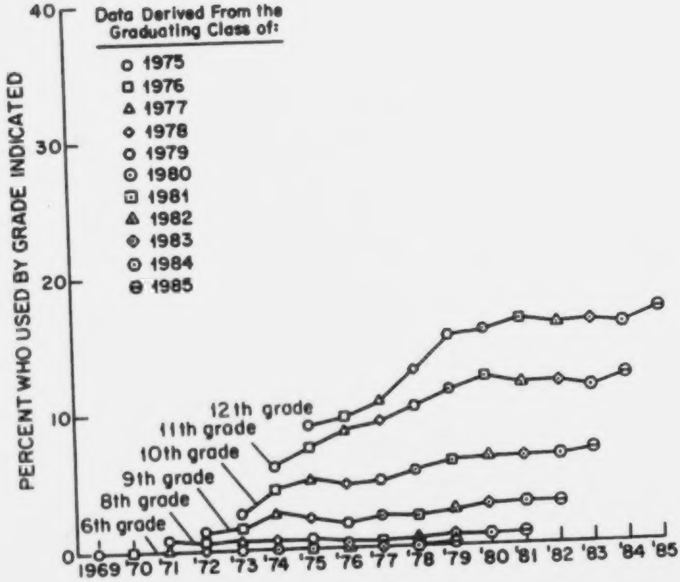
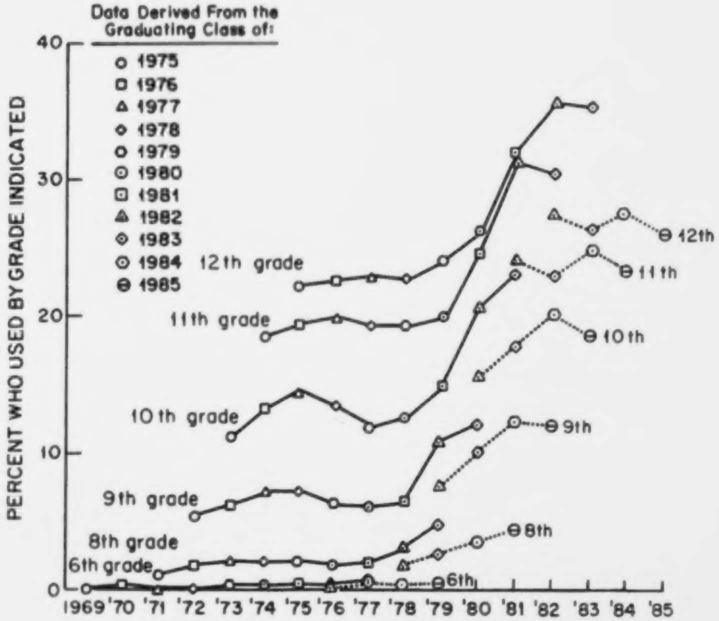


FIGURE 17f

Stimulants: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors



NOTE: The dotted lines connect percentages which result if non-prescription stimulants are excluded.

FIGURE 17g

Hallucinogens: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

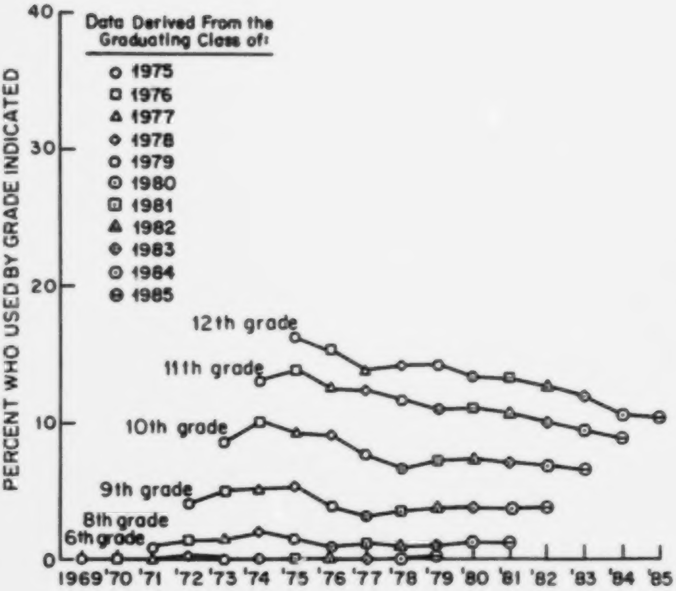


FIGURE 17h

PCP: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

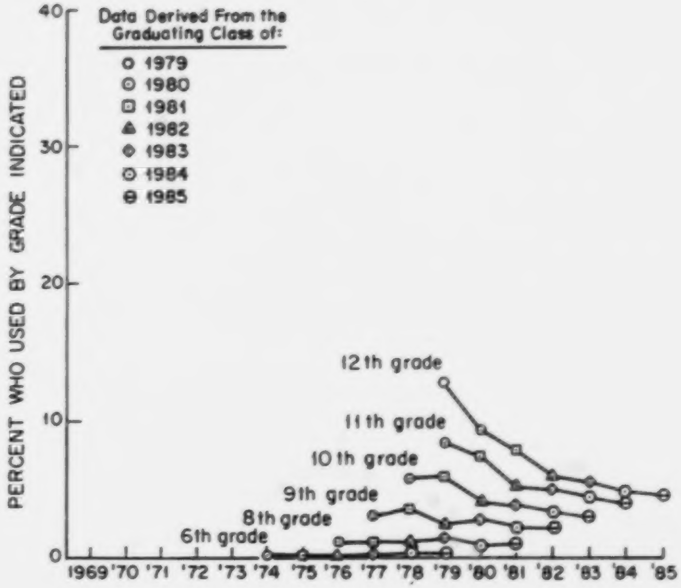


FIGURE 17i

Inhalants: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

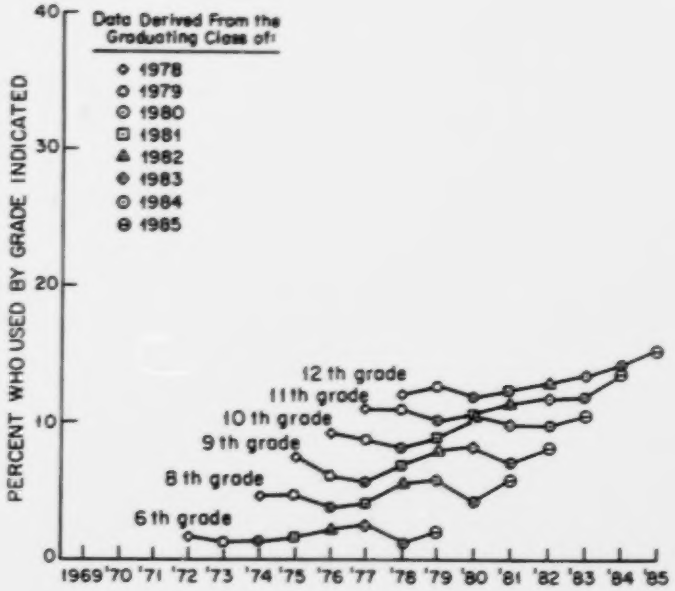


FIGURE 17j

Nitrites: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

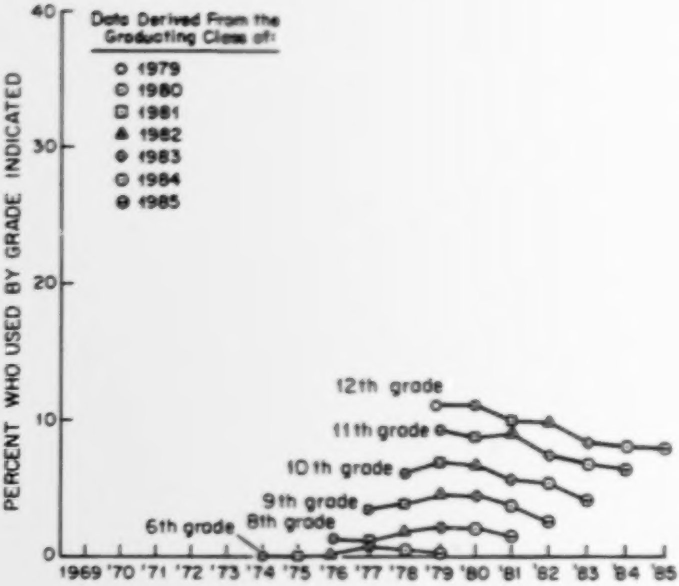


FIGURE 17k

Sedatives: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

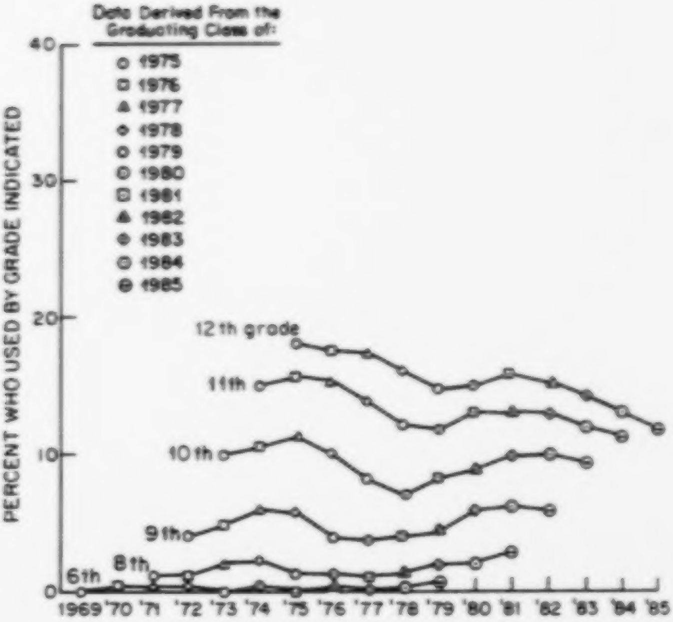


FIGURE 17I

Barbiturates: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

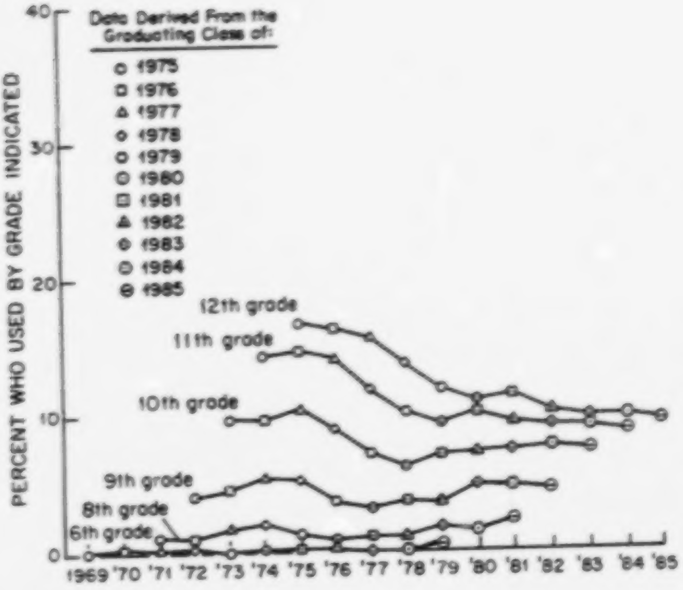


FIGURE 17m

Methaqualone: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

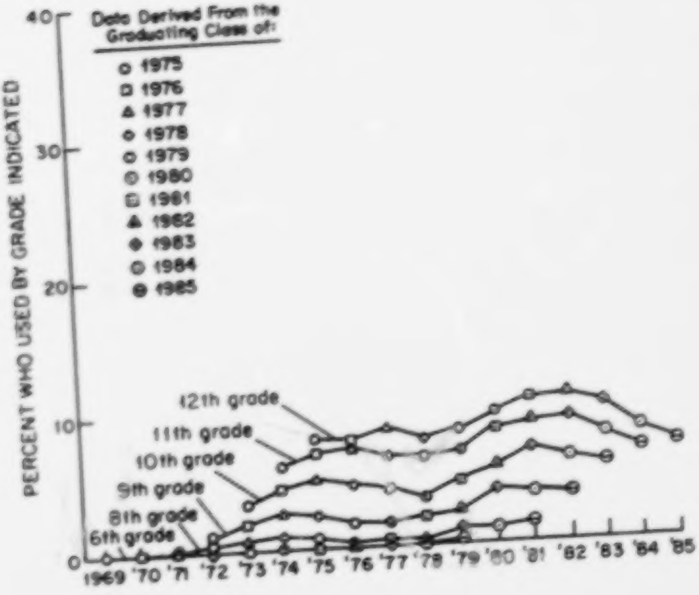


FIGURE 17n

Tranquilizers: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

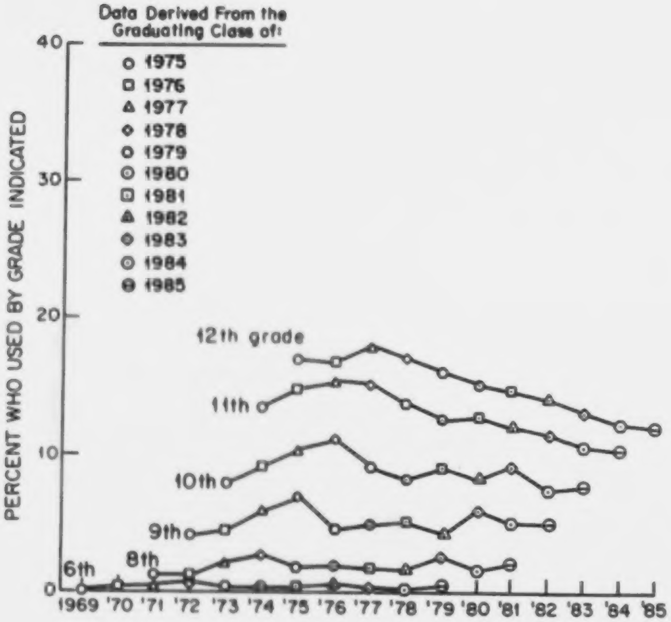


FIGURE 17o

Heroin: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

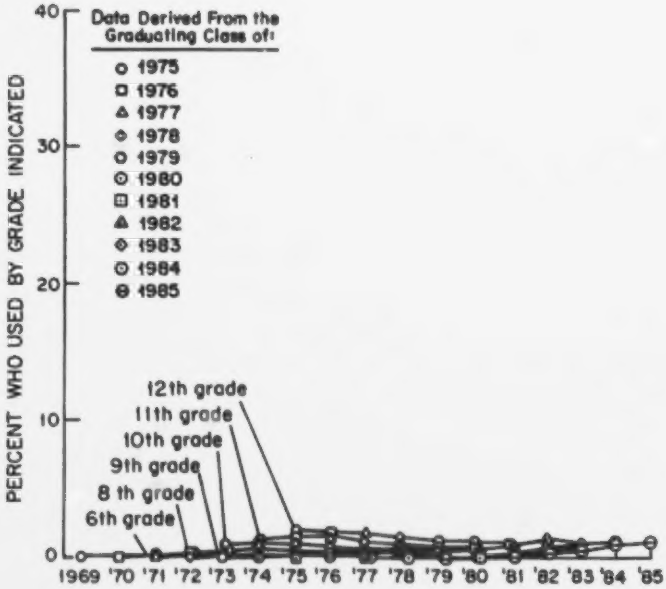


FIGURE 17p

Other Opiates: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

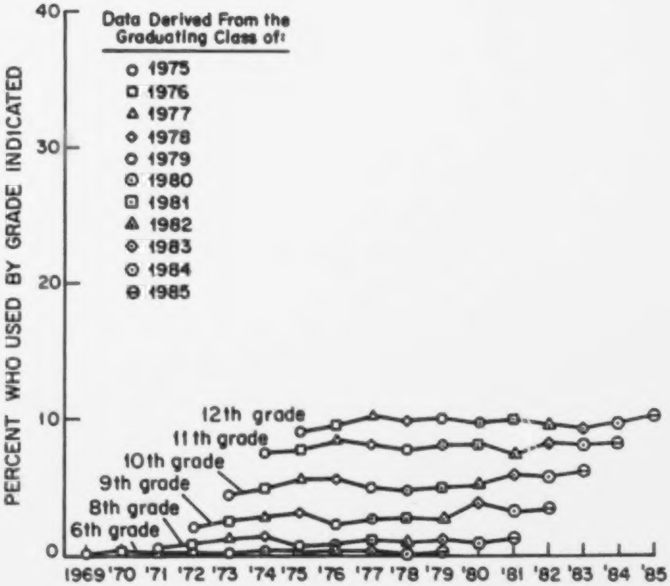


FIGURE 17q

Cigarette Smoking on a Daily Basis: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

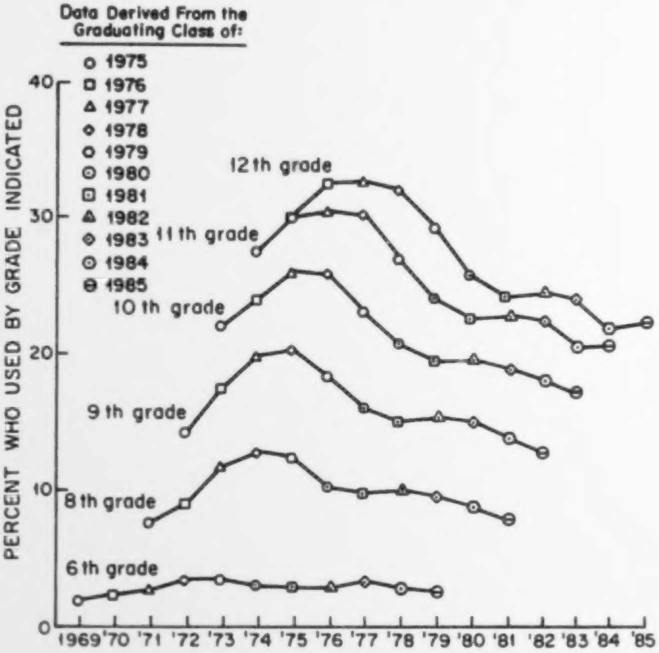
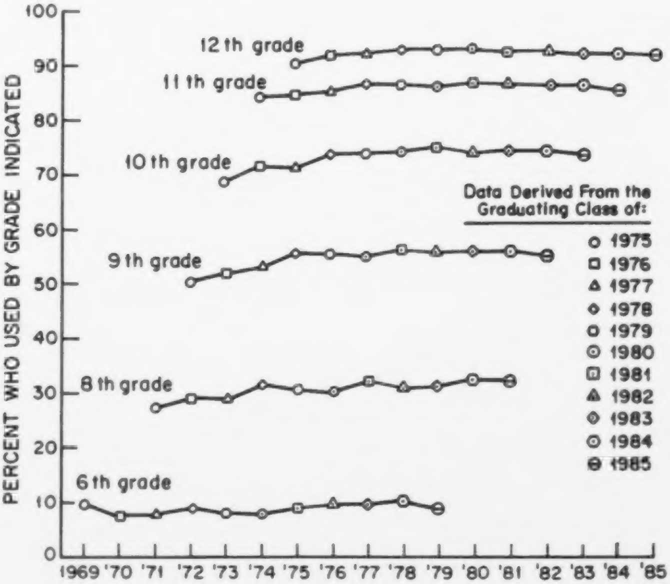


FIGURE 17r

Alcohol: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors



DEGREE AND DURATION OF HIGHS

On one of the five questionnaire forms, seniors who report use of a drug during the prior twelve months are asked how long they usually stay high on that drug and how high they usually get. These measures were developed both to help characterize the drug-using event and to provide indirect measures of dose or quantity of drugs consumed.

- Figure 18 shows the proportion of 1985 seniors who say that they usually get "not at all" high, "a little" high, "moderately" high, or "very" high when they use a given type of drug. The percentages are based on all respondents who report use of the given drug class in the previous twelve months, and therefore each bar cumulates to 100%. The ordering from left to right is based on the percentage of users of each drug who report that they usually get "very" high. (The width of each bar is proportional to the percentage of all seniors having used the drug class in the previous year; this should serve as a reminder that even though a large percentage of users of a drug may get very high, they may represent only a small proportion of all seniors.)

- The drugs which usually result in intense highs are the hallucinogens (LSD and other hallucinogens), heroin, and methaqualone (Quaaludes). (Actually, this question was omitted for heroin beginning in 1982, due to small numbers of cases available each year; but an averaging across earlier years indicated that it would rank very close to LSD.)

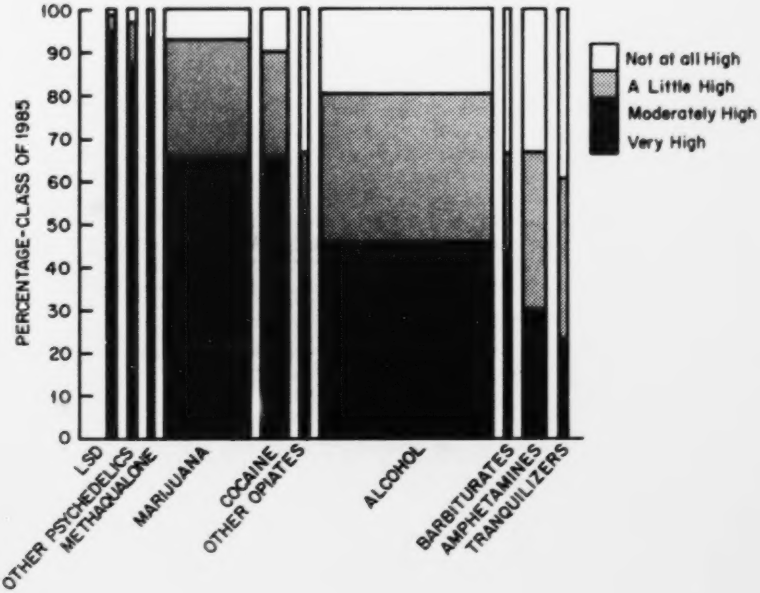
- Following closely are cocaine and marijuana, with roughly two-thirds of the users of each saying they usually get moderately high or very high when using the drug.

- The four major psychotherapeutic drug classes—barbiturates, opiates other than heroin, tranquilizers, and stimulants—are less often used to get high; but substantial proportions of users (from 23% for tranquilizers to 44% for barbiturates) still say they usually get moderately or very high after taking these drugs.

- Relatively few of the many seniors using alcohol say that they usually get very high when drinking, although nearly half usually get at least moderately high. However, for a given individual we would expect more variability from occasion to occasion in the degree of intoxication achieved with alcohol than with most of

FIGURE 18

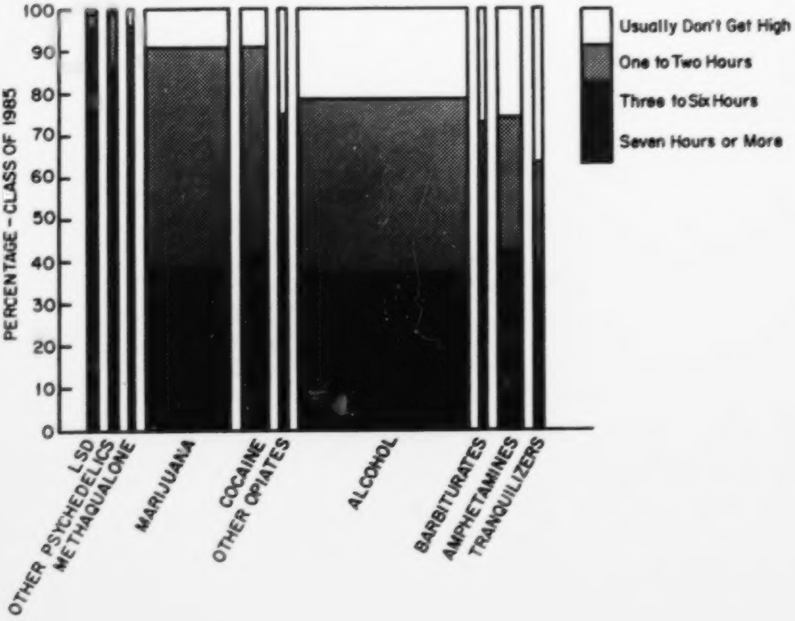
Degree of High Attained by Recent Users



NOTE: The width of each bar is proportionate to the number of seniors reporting any use of each drug in the prior 12 months. Heroin is not included in this figure because these particular questions are not asked of the small number of heroin users.

FIGURE 19

Duration of High Attained by Recent Users



NOTE: The width of each bar is proportionate to the number of seniors reporting any use of each drug in the prior 12 months. Heroin is not included in this figure because these particular questions are not asked of the small number of heroin users.

the other drugs. Therefore, many drinkers surely get very high at least sometimes, even if that is not "usually" the case.

- Figure 19 presents the data on the duration of the highs usually obtained by users of each class of drugs. The drugs are arranged in the same order as for intensity of highs to permit an examination of the amount of correspondence between the degree and duration of highs.

- As can be seen in Figure 19, those drugs which result in the most intense highs generally tend to result in the longest highs. For example, LSD, other hallucinogens, and methaqualone rank one through three respectively on both dimensions, with substantial proportions (from 18% to 60%) of the users of these drugs saying they usually stay high for seven hours or more.

- However, there is not a perfect correspondence between degree and duration of highs. The highs achieved with marijuana, although intense for many users, tend to be relatively short-lived in comparison with most other drugs. The majority of users usually stay high two hours or less, and the modal time is one to two hours (52%), but over one-third (34%) report usual highs lasting 3-6 hours.

- For cocaine users the modal high is one to two hours, though almost as many stay high three or more hours.

- The modal and median duration of highs for barbiturates and methaqualone are three to six hours. Users of opiates other than heroin, stimulants, and tranquilizers report highs of slightly shorter duration.

- In sum, th[illegible] drugs vary considerably in both the duration and degree of the highs usually obtained with them, though most have a median duration of one to two hours. (These data obviously do not address the qualitative differences in the experiences of being "high.") Sizeable proportions of the users of all of these drugs report that they usually get high for at least three hours per occasion, and for a number of drugs—particularly the hallucinogens—appreciable proportions usually stay high for seven hours or more.

Trends in Degree and Duration of Highs

- There have been several important shifts over the last several years in the degree or duration of highs usually experienced by users of the various drugs.

- For cocaine, the proportion who say they usually get high for only two hours or less increased from 36% in 1977 to 54% in 1981, where it has remained since, reflecting a substantial shortening and then leveling in the average duration of highs. There was also some modest decline in the average degree of high attained between 1977 and 1981, again with little change since.

- For opiates other than heroin, there has been a fairly steady decline since 1975 in both the intensity of the highs usually experienced and in the duration of those highs. In 1975, 39% said they usually got "very high" vs. 10% in 1985. The proportion usually staying high for seven or more hours dropped from 28% in 1975 to 14% in 1985. This substantial shift has occurred in part because an increasing proportion of the users say they do not take these drugs "to get high" (4% in 1975 vs. 21% in 1985).

- Stimulants showed a substantial decrease between 1975 and 1981 in the proportion of recent users usually getting very high or moderately high (down from 60% in 1975 to 37% in 1981). Consistent with this, the proportion of users saying they simply "don't take them to get high" increased from 9% in 1975 to 20% by 1981. In addition, the average reported duration of stimulant highs was declining; 41% of the 1975 users said they usually stayed high seven or more hours vs. only 17% of the 1981 users.* In 1982 the revised version of the question about stimulant use was introduced into the form containing subsequent questions on the degree and duration of highs. Based on this revised form, there has been some continued drop in the duration of highs obtained, and (to a lesser extent) in the degree of highs obtained.

- These substantial decreases in both the degree and the duration of highs strongly suggest that there has been some shift in the purposes for which stimulants are being used. An examination of data on self-reported reasons for use tends to confirm this conclusion. In essence, between 1979 and 1984 there had been a relative decline in the social/recreational reasons for use and since 1976 there has been an increase in the frequency with which recent users mention "to lose weight" (from 26% in 1976 to 41% in 1984), "to get more energy" (from 56% to 69%), "to stay awake" (from 52% to 62%), and "to get through the day" (from 22% to 30%). "To feel good or get high," which in 1976 was the first ranked reason at 62% of recent amphetamine users, dropped fairly steadily to 45% in 1984, making it the fourth ranked reason. Similarly, "to have a good time with my friends," which reached a high of 38% in 1979, dropped to 31% in 1980 and to 30% in 1984.

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*The questionnaire form containing the questions on degree and duration of highs is one on which the amphetamine questions were clarified in 1982, to eliminate the inappropriate inclusion of non-prescription stimulants. One might have expected this change to have increased the degree and duration of highs reported, given that real amphetamines would be expected to have greater psychological impact on the average; but the trends still continued downward that year.

The 1985 results suggest that, although intensity and duration of highs continued their decline, there was no further decline in social/recreational reasons for use (to get high and to have a good time with friends increased by 4% each), and no further increase in the frequency of use for instrumental purposes (to lose weight, to get more energy, to stay awake, to get through the day all decreased, by 2-7%). Thus the shift seen between 1976 and 1984 toward more instrumental, and less recreational, use of stimulants may have ended.

- In addition to the relative decline seen earlier in recreational reasons for use of stimulants, it also appears that there was at least some increase in the absolute level of recreational use, though clearly not as steep an increase as the trends through 1981 in overall use might have suggested. The data on exposure to people using amphetamines "to get high or for kicks," which will be discussed further in a section below, show a definite increase between 1976 and 1981 (there was a rise of 8% just between 1979 and 1981). There was no further increase in exposure to people using for those purposes in 1982, however, suggesting that recreational use, as well as overall use, had leveled off, and since 1982 there has been a decrease in such exposure.

- In the last few years the degree and duration of highs usually achieved by the shrinking number of barbiturate users and methaqualone users also has been decreasing. The highs achieved by tranquilizer users also seem to be decreasing slightly since about 1980.

- For marijuana there has been some general downward trending since 1978 in the degree of the highs usually obtained. In 1978, 73% of users said they usually got "moderately high" or "very high"—a figure which dropped to 64% by 1983, and stands at 66% in 1985. There have also been some interesting changes taking place in the duration figures. Recall that most marijuana users say they usually stay high either one to two hours or three to six hours. Between 1975 and 1983 there was a steady shift in the proportions saying they stayed high three or more hours (from 52% in 1975 to 35% in 1983); the proportion stands at 38% in 1985. Until 1979 this shift could have been due almost entirely to the fact that progressively more seniors were using marijuana; and the users in more recent classes, who would not have been users in earlier classes, probably tended to be relatively light users. (We deduce this from the fact that the percentage of all seniors reporting three to six hour highs remained relatively unchanged from 1975 to 1979, while the percentage of all seniors reporting only one to two hour highs increased steadily (from 16% in 1975 to 25% in 1979).

However, the overall prevalence rate did not increase over the past six years (annual prevalence actually dropped by 10%), but the shift toward shorter average highs continued. Thus we must attribute this recent shift to another factor, and the one which seems most likely is a general shift (even among the most marijuana-prone segment) toward a less frequent (or less intense) use of the drug. The drop in daily prevalence since 1979, which certainly is disproportionate to the drop in overall prevalence, is consistent with this interpretation. Also consistent is the fact that the average number of "joints" smoked per day (among those who reported any use in the prior month) has been dropping. In 1976, 49% of the recent users of marijuana indicated that they averaged less than one "joint" per day in the prior 30 days, but by 1985 this proportion had risen to 61%. In sum, not only are fewer high school students now using marijuana, but those who are using seem to be using less frequently and to be taking smaller doses per occasion.

- There are no clearly discernible patterns in the intensity or duration of the highs being experienced with LSD or hallucinogens other than LSD. (Data have not been collected for highs experienced in the use of inhalants, the nitrites specifically, or PCP specifically; and the number of admitted heroin users on a single questionnaire form is inadequate to estimate trends reliably.)

- The intensity and duration of highs associated with alcohol use have been very stable throughout the study period.

ATTITUDES AND BELIEFS ABOUT DRUGS

This section presents the cross-time results for three sets of attitude and belief questions. One set concerns seniors' views about how harmful various kinds of drug use would be for the user, the second asks how much they personally disapprove of various kinds of drug use, and the third deals with attitudes on the legality of using various drugs under different conditions. (The next section covers the closely related topics of parents' and friends' attitudes about drugs, as the seniors perceive them.)

As the data below show, overall percentages disapproving various drugs, and the percentages believing their use to involve serious risk, both tend to parallel the percentages of actual users. Thus, for example, of the illicit drugs marijuana is the most frequently used and the least likely to be seen as risky to use. This and many other such parallels suggest that the individuals who use a drug are less likely to disapprove use of it or to view its use as involving risk. A series of individual-level analyses of these data confirms this conclusion: strong correlations exist between individual use of drugs and the various attitudes and beliefs about those drugs. Those seniors who use a given drug also are more likely to approve its use, see it as less dangerous, and report their own parents and friends as being at least somewhat more accepting of its use.

The attitudes and beliefs about drug use reported below have been changing during recent years, along with actual behavior. In particular, views about marijuana use, and legal sanctions against use, have shown important trends.

Beginning in 1979, scientists, policy makers, and in particular the electronic and printed media, have given considerable attention to the increasing levels of regular marijuana use among young people, and to the potential hazards associated with such use. As will be seen below, attitudes and beliefs about regular use of marijuana have shifted dramatically since 1979 in a more conservative direction—a shift which coincides with a reversal in the previous rapid rise of daily use, and which very likely reflects the impact of this increased public attention.

Perceived Harmfulness of Drugs

Beliefs in 1985 about Harmfulness

- A substantial majority of high school seniors perceive regular use of any of the illicit drugs as entailing "great risk" of harm for the user (see Table 15). Some 86% of the sample feel this way about heroin—the highest proportion for any of these drugs—while 83% associate great risk with using LSD. The proportions attributing great risk to cocaine, barbiturates, and amphetamines are 79%, 68%, and 67% respectively.

- Regular use of cigarettes (i.e., one or more packs a day) is judged by two-thirds of all seniors (67%) as entailing a great risk of harm for the user.

- Regular use of marijuana is judged to involve great risk by 70% of the sample, slightly more than judge cigarette smoking to involve great risk, perhaps in part because marijuana can have dramatic short-term impacts on mood, behavior, self-control, etc., in addition to any long-term physiological impacts.

- Regular use of alcohol was more explicitly defined in several questions. Very few (24%) associate much risk of harm with having one or two drinks almost daily. Only four in every ten (43%) think there is great risk involved in having five or more drinks once or twice each weekend. Fully two-thirds (70%) think the user takes a great risk in consuming four or five drinks nearly every day, but this means that about a third of the students do not view this pattern of regular heavy drinking as entailing great risk.

- Compared with the above perceptions about the risks of regular use of each drug, many fewer respondents feel that a person runs a "great risk" of harm by simply trying the drug once or twice.

- Very few think there is much risk in using marijuana experimentally (15%) or even occasionally (25%).

- Experimental use of the other illicit drugs, however, is still viewed as risky by a substantial proportion. The percentage associating great risk with experimental use ranges from about 25% for amphetamines and barbiturates to 47% for heroin. Despite the amount of negative publicity cocaine use has received recently, only about a third (34%) see great risk involved in experimenting with it. This suggests one reason why so many young people have eventually gotten into trouble with this extremely dependence-producing drug.

- Practically no one (5%) believes there is much risk involved in trying an alcoholic beverage once or twice.

Trends in Perceived Harmfulness

- Several very important trends have been taking place in recent years in these beliefs about the dangers

TABLE 15

Trends in Perceived Harmfulness of Drugs

Q. How much do you think people risk harming themselves (physically or in other ways), if they...	Percent saying "great risk"[a]											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change
Try marijuana once or twice	15.1	11.4	9.5	8.1	9.4	10.0	13.0	11.5	12.7	14.7	14.8	+0.1
Smoke marijuana occasionally	18.1	15.0	13.4	12.4	13.5	14.7	19.1	18.3	20.6	22.6	24.5	+1.9
Smoke marijuana regularly	43.3	38.6	36.4	34.9	42.0	50.4	57.6	60.4	62.8	66.9	70.4	+3.5s
Try LSD once or twice	49.4	45.7	43.2	42.7	41.6	43.9	45.5	44.9	44.7	45.4	43.5	−1.9
Take LSD regularly	81.4	80.8	79.1	81.1	82.4	83.0	83.5	83.5	83.2	83.8	82.9	−0.9
Try cocaine once or twice	42.6	39.1	35.6	33.2	31.5	31.3	32.1	32.8	33.0	35.7	34.0	−1.7
Take cocaine regularly	73.1	72.3	68.2	68.2	69.5	69.2	71.2	73.0	74.3	78.8	79.0	+0.2
Try heroin once or twice	60.1	58.9	55.8	52.9	50.4	52.1	52.9	51.1	50.8	49.8	47.3	−2.5
Take heroin occasionally	75.6	75.6	71.9	71.4	70.9	70.9	72.2	69.8	71.8	70.7	69.8	−0.9
Take heroin regularly	87.2	88.6	86.1	86.6	87.5	86.2	87.5	86.0	86.1	87.2	86.0	−1.2
Try amphetamines once or twice	35.4	33.4	30.8	29.9	29.7	29.7	26.4	25.3	24.7	25.4	25.2	−0.2
Take amphetamines regularly	69.0	67.3	66.6	67.1	69.9	69.1	66.1	64.7	64.8	67.1	67.2	+0.1
Try barbiturates once or twice	34.8	32.5	31.2	31.3	30.7	30.9	28.4	27.5	27.0	27.4	26.1	−1.3
Take barbiturates regularly	69.1	67.7	68.6	68.4	71.6	72.2	69.9	67.6	67.7	68.5	68.3	−0.2
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	5.3	4.8	4.1	3.4	4.1	3.8	4.6	3.5	4.2	4.6	5.0	+0.4
Take one or two drinks nearly every day	21.5	21.2	18.5	19.6	22.6	20.3	21.6	21.6	21.6	23.0	24.4	+1.4
Take four or five drinks nearly every day	63.5	61.0	62.9	63.1	66.2	65.7	64.5	65.5	66.8	68.4	69.8	+1.4
Have five or more drinks once or twice each weekend	37.8	37.0	34.7	34.5	34.9	35.9	36.3	36.0	38.6	41.7	43.0	+1.3
Smoke one or more packs of cigarettes per day	51.3	56.4	58.4	59.0	63.0	63.7	63.3	60.5	61.2	63.8	66.5	+2.7
Approx. N =	(2804)	(3225)	(3570)	(3770)	(3250)	(3234)	(3604)	(3557)	(3305)	(3262)	(3250)	

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

[a] Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar.

associated with using various drugs (see Table 15 and Figures 20 and 21).

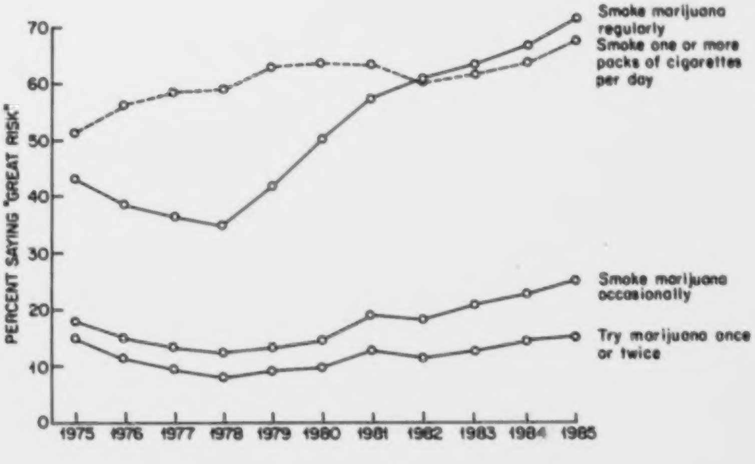
- One of the most important trends involves marijuana (Figure 20). From 1975 through 1978 there had been a decline in the harmfulness perceived to be associated with all levels of marijuana use; but in 1979, for the first time, there was an increase in these proportions—an increase which preceded any appreciable downturn in use and which has continued fairly steadily since then. By far the most impressive increase has occurred for regular marijuana use, where the proportion perceiving it as involving a great risk has doubled in seven years—from 35% in 1978 to 70% in 1985. This dramatic change—which continued vigorously in 1985 with a significant 4% increase from 1984—has been occurring during a period in which a substantial amount of scientific and media attention has been devoted to the potential dangers of heavy marijuana use. While there have been some upward shifts in concerns about the harmfulness of occasional, and even experimental, use, they have been nowhere nearly as large, though both did continue in 1985.

- There also had been an important increase over a longer period in the number who think pack-a-day cigarette smoking involves great risk to the user (from 51% in 1975 to 64% in 1980). This shift corresponded with, and to some degree preceded, the downturn in regular smoking found in this age group (compare Figures 9f and 20). But in 1981 this statistic showed no further increase (presaging the end of the decline in use), and the figures for 1982 and 1983 actually showed some reversal of that trend. However, in 1984 there was once again a resumption of the trend, with a nearly 3% jump in the proportion seeing great risk being associated with regular smoking, followed by another 3% increase in 1985. Nevertheless, what may be most important is that about a third (32.0%) of these young people do not believe there is a great risk, despite all that is known today about the health consequences of cigarette smoking.

- For most of the other illicit drugs, the period from 1975 to 1979 marked a modest but consistent trend in the direction of fewer students associating much risk with experimental or occasional use of them (Table 15 and Figure 21). Only for amphetamines and barbiturates has this trend continued beyond 1979, until about 1982 in both cases. Over the last several years there has been little change, although perceived risk of harm in experimental or occasional use of the illicit drugs other than marijuana all dropped slightly in 1985.

FIGURE 20

Trends in Perceived Harmfulness: Marijuana and Cigarettes



- The percentage who perceived great risk in trying cocaine once or twice dropped from 43% in 1975 to 31% in 1980, which generally corresponds to a period of rapidly increasing use. But perceived risk then began to inch upward over the next four years, to 36% in 1984; a slight decrease in 1985 leaves the current figure at 34%. The proportion seeing great risk in regular cocaine use also dropped somewhat from 1975 to 1977 and remained fairly level until 1980; but then rose 5% over the next three years before jumping a full 4.5% in 1984 alone. In 1985 this proportion remained stable at 79%.

- In sum, between 1975 and 1979 there was a distinct decline in perceived harmfulness associated with use of all the illicit drugs. Since 1979, there has been a dramatic increase in concerns about regular marijuana use, and a more modest increase in concerns about use of that drug at less frequent levels. In general, concerns about use of other illicit drugs have changed rather little over the last several years, although perceived risk in regular use of cocaine has increased, and risks associated with amphetamine and barbiturate use have dropped slightly.

- Beliefs concerning the risk associated with alcohol use at various levels have remained largely unchanged over the past eight years. The one exception occurred with occasional heavy drinking, where the proportion perceiving great risk rose from a low of 35% in 1979 to 43% in 1985. Some 3% of this 8% change occurred in 1984 alone, the first year in which the reported prevalence of this type of drinking actually declined. Thus the gradual change in beliefs about the riskiness of this behavior preceded a change in use by several years—once again suggesting the importance of these beliefs in determining behavior.

Personal Disapproval of Drug Use

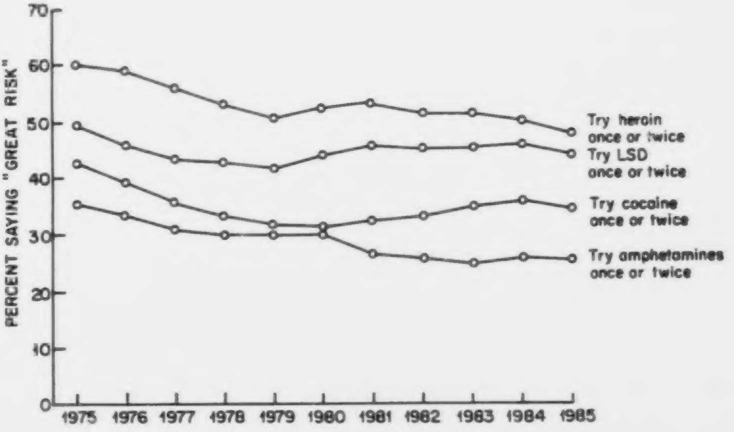
A different set of questions was developed to try to measure any general moral sentiment attached to various types of drug use. The phrasing, "Do you disapprove of people (who are 18 or older) doing each of the following" was adopted.

Extent of Disapproval in 1985

- The vast majority of these students do not condone regular use of any of the illicit drugs (see Table 16). Even regular marijuana use is disapproved by 86%, and regular use of each of the other illicits receives disapproval from between 93% and 98% of today's high school seniors.

FIGURE 21

Trends in Perceived Harmfulness: Other Drugs



- Smoking a pack (or more) of cigarettes per day receives the disapproval of 72% of the age group.

- Drinking at the rate of one or two drinks daily receives disapproval from 71% of the seniors. A curious finding is that weekend binge drinking (five or more drinks once or twice each weekend) is acceptable to more seniors than is moderate daily drinking; only 60% disapprove of having five or more drinks once or twice a weekend. This is in spite of the fact that more seniors associate great risk with weekend binge drinking (43%) than with the daily drinking (24%). One likely explanation for these seemingly inconsistent findings may be the fact that a greater proportion of this age group are themselves weekend binge drinkers rather than regular daily drinkers. They thus express attitudes accepting of their own behavior, even though such attitudes may be somewhat inconsistent with their beliefs about possible consequences.

- For each of the drugs included in the question, fewer people indicate disapproval of experimental or occasional use than of regular use, as would be expected. The differences are not great, however, for the illicit drugs other than marijuana. For example, 79% disapprove experimenting with cocaine vs. 94% who disapprove its regular use.

- For marijuana, however, the rate of disapproval varies substantially for different usage habits. Although the great majority (86%) disapprove regular use, only about half (51%) disapprove trying it.

Trends in Disapproval

- Between 1975 and 1977 there occurred a substantial decrease in disapproval of marijuana use at any level of frequency (see Table 16 and Figure 22). About 14% fewer seniors in the class of 1977 (compared with the class of 1975) disapproved of experimenting, 11% fewer disapproved of occasional use, and 6% fewer disapproved of regular use. Since 1977, however, there has been a substantial reversal of that trend, with disapproval of experimental use having risen by 18%, disapproval of occasional use by 22%, and disapproval of regular use by 20%.

- Until 1980 the proportion of seniors who disapproved trying amphetamines had remained extremely stable (at 75%). This proportion dropped slightly in 1981 (to 71%), but increased thereafter and again reached 75% in 1985.

TABLE 16
Trends in Proportions Disapproving of Drug Use

Q. Do you disapprove of people (who are 18 or older) doing each of the following?[b]	Percent "disapproving"[a]											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change
Try marijuana once or twice	47.0	38.4	33.4	33.4	34.2	39.0	40.0	45.5	46.3	49.3	51.4	+2.1
Smoke marijuana occasionally	54.8	47.8	44.3	43.5	45.3	49.7	52.6	50.1	60.7	63.5	65.8	+2.3
Smoke marijuana regularly	71.9	69.5	65.5	67.5	69.2	74.6	77.4	80.6	82.5	84.7	85.5	+0.8
Try LSD once or twice	82.8	84.6	83.9	85.4	86.6	87.3	86.4	88.8	89.1	88.9	89.5	+0.6
Take LSD regularly	94.1	95.3	95.8	96.4	96.9	96.7	96.8	96.7	97.0	96.8	97.0	+0.2
Try cocaine once or twice	81.3	82.4	79.1	77.0	74.7	76.3	74.6	76.6	77.0	79.7	79.3	−0.4
Take cocaine regularly	93.3	93.9	92.1	91.9	90.8	91.1	90.7	91.5	93.2	94.5	93.8	−0.7
Try heroin once or twice	91.5	92.6	92.5	92.0	93.4	93.5	93.5	94.6	94.3	94.0	94.0	0.0
Take heroin occasionally	94.8	96.0	96.0	96.4	96.8	96.7	97.2	96.9	96.9	97.1	96.8	−0.3
Take heroin regularly	96.7	97.5	97.2	97.8	97.9	97.6	97.8	97.5	97.7	98.0	97.6	−0.4
Try amphetamines once or twice	74.8	75.1	74.2	74.8	75.1	75.4	71.1	72.6	72.3	72.8	74.9	+2.1
Take amphetamines regularly	92.1	92.8	92.5	93.5	94.4	93.0	91.7	92.0	92.6	93.6	93.3	−0.3
Try barbiturates once or twice	77.7	81.3	81.1	82.4	84.0	83.9	82.4	84.4	83.1	84.1	84.9	+0.8
Take barbiturates regularly	93.3	93.6	93.0	94.3	95.2	95.4	94.2	94.4	95.1	95.1	95.5	+0.4
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	21.6	18.2	15.6	15.6	15.8	16.0	17.2	18.2	18.4	17.4	20.3	+2.9s
Take one or two drinks nearly every day	67.6	68.9	66.8	67.7	68.3	69.0	69.1	69.9	68.9	72.9	70.9	−2.0
Take four or five drinks nearly every day	88.7	90.7	88.4	90.2	91.7	90.8	91.8	90.9	90.0	91.0	92.0	+1.0
Have five or more drinks once or twice each weekend	60.3	58.6	57.4	56.2	56.7	55.6	55.5	58.8	56.6	59.6	60.4	+0.8
Smoke one or more packs of cigarettes per day	67.5	65.9	66.4	67.0	70.3	70.8	69.9	69.4	70.8	73.0	72.3	−0.7
Approx. N =	(2677)	(3234)	(3582)	(3686)	(3221)	(3261)	(3610)	(3651)	(3341)	(3254)	(3265)	

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

[a] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

[b] The 1975 question asked about people who are "20 or older."

- During the late 1970's personal disapproval of experimenting with barbiturates had been increasing (from 78% in 1975 to 84% in 1979). Since then it has remained relatively stable.

- In earlier years disapproval of regular cigarette smoking had been increasing modestly (from 66% in 1976 to 71% in 1980). It then remained fairly stable through 1983 before resuming its increase in 1984 (when actual use resumed its decline). Disapproval is down very slightly in 1985 (and actual use is up very slightly).

- Concurrent with the years of increase in actual cocaine use, disapproval of experimental use of cocaine had declined somewhat, from a high of 82% in 1976 down to 75% in 1979. It then leveled for four years, showed a statistically significant increase in 1984, and remained essentially unchanged in 1985.

- There has been relatively little change in attitudes regarding alcohol use, with one exception. There was a slight softening of attitudes regarding weekend binge drinking, with disapproval dropping from 60% in 1975 to 56% in 1978; since then disapproval has been increasing, and in 1985 is again at 60%.

Attitudes Regarding the Legality of Drug Use

Since the legal restraints on drug use appeared likely to be in a state of flux for some time, we decided at the beginning of the study to measure attitudes about legal sanctions. Table 17 presents a statement of one set of general questions on this subject along with the answers provided by each senior class. The set lists a sampling of illicit and licit drugs and asks whether their use should be prohibited by law. A distinction is consistently made between use in public and use in private—a distinction which proved quite important in the results.

Attitudes in 1985

- Most seniors (78%) favor legally prohibiting marijuana use in public places, despite the fact that the majority have used marijuana themselves; but considerably fewer (45%) feel that way about marijuana use in private.

- In addition, the great majority believe that the use in public of other illicit drugs than marijuana should be prohibited by law (e.g., 78% in the case of amphetamines and barbiturates, 86% for heroin).

- Fully 43% believe that cigarette smoking in public places should be prohibited by law. More think getting drunk in such places should be prohibited (53%).

TABLE 17

Trends in Attitudes Regarding Legality of Drug Use

Q. Do you think that people (who are 18 or older) should be prohibited by law from doing each of the following?[b]	Percent saying "yes"[a]											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change
Smoke marijuana in private	32.8	27.5	26.8	25.4	28.0	28.9	35.4	36.6	37.8	41.6	44.7	+3.1s
Smoke marijuana in public places	63.1	59.1	58.7	59.5	61.8	66.1	67.4	72.8	73.6	75.2	78.2	+3.0s
Take LSD in private	67.2	65.1	63.3	62.7	62.4	65.8	62.6	67.1	66.7	67.9	70.6	+2.7
Take LSD in public places	85.8	81.9	79.3	80.7	81.5	82.8	80.7	82.1	82.8	82.4	84.8	+2.4s
Take heroin in private	76.3	72.4	69.2	68.8	68.5	70.3	68.8	69.3	69.7	69.8	73.3	+3.5s
Take heroin in public places	90.1	84.8	81.0	82.5	84.0	83.8	82.4	82.5	83.7	83.4	85.8	+2.4s
Take amphetamines or barbiturates in private	57.2	53.5	52.8	52.2	53.4	54.1	52.0	53.5	52.8	54.4	56.3	+1.9
Take amphetamines or barbiturates in public places	79.6	76.1	73.7	75.8	77.3	76.1	74.2	75.5	76.7	76.8	78.3	+1.5
Get drunk in private	14.1	15.6	18.6	17.4	16.8	16.7	19.6	19.4	19.9	19.7	19.8	+0.1
Get drunk in public places	55.7	50.7	49.0	50.3	50.4	48.3	49.1	50.7	52.2	51.1	53.1	+2.0
Smoke cigarettes in certain specified public places	NA	NA	42.0	42.2	43.1	42.8	43.0	42.0	40.5	39.2	42.8	+3.6s
Approx. N =	(2620)	(3265)	(3629)	(3783)	(3288)	(3224)	(3611)	(3627)	(3315)	(3236)	(3254)	

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. NA indicates data not available.

[a] Answer alternatives were: (1) No, (2) Not sure, and (3) Yes.

[b] The 1975 question asked about people who are "20 or older."

- For all drugs, fewer students believe that use in private settings should be illegal, though in the cases of LSD and heroin, the differences are not very substantial.

Trends in These Attitudes

- From 1975 through 1977 there was a modest decline (from 4% to 9%, depending on the substance) in the proportion of seniors who favored legal prohibition of private use of any of the illicit drugs. By 1985, however, these proportions have all increased.

- Over the past six years (from 1979 to 1985) there has been a sharp jump in the proportion favoring legal prohibition of marijuana use, either in private (up from 28% to 45%) or in public (up from 62% to 78%).

- After several years of relative stability, in 1985 there has also been a statistically significant increase in the proportions favoring prohibition of public and private heroin use.

- For other illicit drugs, the changes are more modest, but between 1984 and 1985 all showed increased proportions favoring prohibition.

- Getting drunk and smoking cigarettes in public also showed increases in the proportions favoring prohibition.

The Legal Status of Marijuana

Another set of questions goes into more detail about what legal sanctions, if any, students think should be attached to the use and sale of marijuana. Respondents also are asked to guess how they would be likely to react to legalized use and sale of the drug. While the answers to such a question must be interpreted cautiously, a special study of the effects of marijuana decriminalization at the state level, conducted as part of the Monitoring the Future series, suggests that in the aggregate their predictions about how they would react proved relatively accurate.*

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*See Johnston, L.D., O'Malley, P.M., and Bachman, J.G. Marijuana decriminalization: The impact on youth, 1975-1980 (Monitoring the Future Occasional Paper no. 13). Ann Arbor: Institute for Social Research, 1981, 85 pp.

TABLE 18

Trends in Attitudes Regarding Marijuana Laws

(Entries are percentages)

Q. There has been a great deal of public debate about whether marijuana use should be legal. Which of the following policies would you favor?	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985
Using marijuana should be entirely legal	27.3	32.6	33.6	32.9	32.1	26.3	23.1	20.0	18.9	18.6	16.6
It should be a minor violation like a parking ticket but not a crime	25.3	29.0	31.4	30.2	30.1	30.9	29.3	28.2	26.3	23.6	25.7
It should be a crime	30.5	25.4	21.7	22.2	24.0	26.4	32.1	34.7	36.7	40.6	40.8
Don't know	16.8	13.0	13.4	14.6	13.8	16.4	15.4	17.1	18.1	17.2	16.9
N =	(2617)	(3264)	(3622)	(3721)	(3278)	(3211)	(3503)	(3615)	(3301)	(3230)	(3236)
Q. If it were legal for people to USE marijuana, should it also be legal to SELL marijuana?											
No	27.8	23.0	22.5	21.8	22.9	25.0	27.7	29.3	27.4	30.9	32.6
Yes, but only to adults	37.1	49.8	52.1	53.6	53.2	51.8	48.6	46.2	47.6	45.8	43.2
Yes, to anyone	16.2	13.3	12.7	12.0	11.3	9.6	10.5	10.7	10.5	10.6	11.2
Don't know	18.9	13.9	12.7	12.6	12.6	13.6	13.2	13.8	14.6	12.8	13.1
N =	(2616)	(3279)	(3628)	(3719)	(3280)	(3210)	(3590)	(3619)	(3300)	(3222)	(3237)
Q. If marijuana were legal to use and legally available, which of the following would you be most likely to do?											
Not use it, even if it were legal and available	53.2	50.4	50.6	46.4	50.2	53.3	55.2	60.0	60.1	62.0	63.0
Try it	8.2	8.1	7.0	7.1	6.1	6.8	6.0	6.3	7.2	6.6	7.5
Use it about as often as I do now	22.7	24.7	26.8	30.9	29.1	27.3	24.8	21.7	19.8	19.1	17.7
Use it more often than I do now	6.0	7.1	7.4	6.3	6.0	4.2	4.7	3.8	4.9	4.7	3.7
Use it less than I do now	1.3	1.5	1.5	2.7	2.5	2.6	2.5	2.2	1.5	1.6	1.6
Don't know	8.5	8.1	6.6	6.7	6.1	5.9	6.9	6.0	6.4	6.0	6.5
N =	(2602)	(3272)	(3625)	(3711)	(3277)	(3210)	(3598)	(3618)	(3296)	(3224)	(3232)

Attitudes and Predicted Response to Legalization: 1985

- As shown in Table 18, less than one-fifth of all seniors believe marijuana use should be entirely legal (17%). About one out of four (26%) feel it should be treated as a minor violation—like a parking ticket—but not as a crime. Another 17% indicate no opinion, leaving about two-fifths (41%) who feel it still should be treated as a crime.

- Asked whether they thought it should be legal to sell marijuana if it were legal to use it, a majority (54%) said "yes." However, nearly all of these respondents would permit sale only to adults, thus suggesting more conservatism on this subject than might generally be supposed.

- High school seniors predict that they would be little affected by the legalization of either the sale or the use of marijuana. Fully 63% of the respondents say that they would not use the drug even if it were legal to buy and use, and another 19% indicate they would use it about as often as they do now, or less. Only 4% say they would use it more often than at present and only another 8% think they would try it. Some 7% say they do not know how they would react. The special study of the effects of decriminalization at the state level (which falls short of the hypothetical situation posited in this question) revealed no evidence of any impact on the use of marijuana, nor even on attitudes and beliefs concerning its use.

Trends in Attitudes and Predicted Responses

- Between 1976 and 1979 seniors' preferences for decriminalization or legalization remained fairly constant; but in the past six years there has been a sharp drop in the proportion favoring outright legalization (down from 32% in 1979 to 17% in 1985), while there was a corresponding increase in the proportion saying marijuana use should be a crime (from 24% to 41%).

- Also reflecting the recent increased conservatism about marijuana, somewhat fewer now would support legalized sale even if use were to be made legal (down from 65% in 1979 to 54% in 1985).

- The predictions about personal marijuana use, if sale and use were legalized, have been quite similar for all high school classes. The slight shifts being observed are mostly attributable to the changing proportions of seniors who actually use marijuana.

- In sum, in recent years American young people have become more supportive of legal prohibitions on the use of illegal drugs, whether used in private or in public. The fairly tolerant attitudes of students in the late 70's toward marijuana use have eroded considerably as substantially more think it should be treated as a criminal offense and correspondingly fewer think it should be entirely legal to use.

THE SOCIAL MILIEU

The preceding section dealt with seniors' own attitudes about various forms of drug use. Attitudes about drugs, as well as drug-related behaviors, obviously do not occur in a social vacuum. Drugs are discussed in the media; they are a topic of considerable interest and conversation among young people; they are also a matter of much concern to parents, concern which often is strongly communicated to their children. Young people are known to be affected by the actual drug-taking behaviors of their friends and acquaintances, as well as by the availability of the various drugs. This section presents data on several of these relevant aspects of the social milieu.

We begin with two sets of questions about parental and peer attitudes, questions which closely parallel the questions about respondents' own attitudes about drug use, discussed in the preceding section. Since parental attitudes are now included in the survey only intermittently, those discussed here are based on the 1979 results.

Perceived Attitudes of Parents and Friends

Perceptions of Parental Attitudes

- A large majority of seniors in 1979 felt that their parents would disapprove or strongly disapprove of their exhibiting any of the drug use behaviors shown in Table 19. (The data for the perceived parental attitudes are not given in tabular form, but are displayed in Figures 22 and 23.)

- Drug use appears to constitute one area in which the position of parents approaches complete unanimity. Over 97% of seniors said that their parents would disapprove or strongly disapprove of their smoking marijuana regularly, even trying LSD or amphetamines, or having four or five drinks every day. (Although the questions did not include more frequent use of LSD or amphetamines, or any use of heroin, it is obvious that if such behaviors had been included in the list virtually all seniors would have indicated parental disapproval.)

- Even experimental use of marijuana was seen as a parentally disapproved activity by the great majority of the seniors (85%). Assuming that the students were generally correct about their parents' attitudes, these results clearly show a substantial generational difference of opinion about this drug.

TABLE 19

Trends in Proportion of Friends Disapproving of Drug Use

Q. How do you think your close friends feel (or would feel) about you...	Adjust-ment Factor	Percent saying friends disapprove[a] Class of 1975[b]	Class of 1976	Class of 1977[b]	Class of 1978	Class of 1979[b]	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change
Trying marijuana once or twice	(−0.5)	44.3	NA	41.8	NA	40.9	42.6	46.4	50.3	52.0	54.1	54.7	+0.6
Smoking marijuana occasionally	(+0.8)	54.8	NA	49.0	NA	48.2	50.6	55.9	57.4	59.9	62.9	64.2	+1.3
Smoking marijuana regularly	(+4.8)	75.0	NA	69.1	NA	70.2	72.0	75.0	74.7	77.6	79.2	81.0	+1.8
Trying LSD once or twice	(+2.0)	85.6	NA	86.6	NA	87.6	87.4	86.5	87.8	87.8	87.6	88.6	+1.0
Trying an amphetamine once or twice	(+2.2)	78.8	NA	80.3	NA	81.0	78.9	74.4	75.7	76.8	77.0	77.0	0.0
Taking one or two drinks nearly every day	(+7.8)	67.2	NA	71.0	NA	71.0	70.5	79.5	71.9	71.7	73.6	75.4	+1.8
Taking four or five drinks every day	(+9.3)	89.2	NA	88.1	NA	88.5	87.9	88.4	86.6	86.0	86.1	88.2	+2.1
Having five or more drinks once or twice every weekend	(+4.7)	55.0	NA	53.4	NA	51.3	50.6	50.3	51.2	50.6	51.3	55.9	+4.6ss
Smoking one or more packs of cigarettes per day	(+5.3)	63.6	NA	68.3	NA	73.4	74.4	73.8	70.3	72.2	73.9	73.7	−0.2
Approx. N =		(2488)	(NA)	(2971)	(NA)	(2716)	(2766)	(3120)	(3024)	(2722)	(2721)	(2688)	

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. NA indicates data not available.

[a] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

[b] These figures have been adjusted by the factors reported in the first column because of lack of comparability of question-context among administrations. (See text for discussion.)

- Also likely to be perceived as rating high parental disapproval (around 92% disapproval) were occasional marijuana use, taking one or two drinks nearly every day, and pack-a-day cigarette smoking.

- Slightly lower proportions of seniors (85%) felt their parents would disapprove of their having five or more drinks once or twice every weekend. This happened to be exactly the same percentage as said that their parents would disapprove of simply experimenting with marijuana.

- There is no reason to think that parental attitudes have softened in the period since 1979. If anything the opposite seems more likely to be the case, given the rising public concern about marijuana and cocaine and the burgeoning parents' movement against drugs.

Current Perceptions of Friends' Attitudes

- A parallel set of questions asked respondents to estimate their friends' attitudes about drug use (Table 19). These questions ask "How do you think your close friends feel (or would feel) about you ...." The highest levels of disapproval for experimenting with a drug are associated with trying LSD (89%) and trying an amphetamine (77%). Presumably, if heroin were on the list it would receive the highest peer disapproval; and, judging from respondents' own attitudes, experimenting with cocaine would be slightly more disapproved than experimenting with amphetamines, while experimenting with barbiturates would be still less popular.

- Even experimenting with marijuana is now "out" with most seniors' friends (55%); and a substantial majority think their friends would disapprove if they smoked marijuana regularly (81%).

- About three-quarters of all seniors think they would face peer disapproval if they smoked a pack or more of cigarettes daily (74%).

- While heavy drinking on weekends is judged by over half (56%) to be disapproved by their friends, substantially more (75%) think consumption of one or two drinks daily would be disapproved. The great majority (88%) would face the disapproval of their friends if they engaged in heavy daily drinking.

- In sum, peer norms differ considerably for the various drugs and for varying degrees of involvement with those drugs, but overall they tend to be quite conservative. The great majority of seniors have friendship circles which do not condone use of the illicit drugs other than marijuana, and over four-fifths feel that their friends would disapprove of regular marijuana use. In fact, over half of them now believe their friends would disapprove of their even trying marijuana.

A Comparison of the Attitudes of Parents, Peers, and Respondents Themselves

- A comparison of the perceptions of friends' disapproval with perceptions of parents' disapproval shows several interesting findings.

- First there is rather little variability among different students in their perceptions of their parents' attitudes: on any of the drug behaviors listed nearly all say their parents would disapprove. Nor is there much variability among the different drugs in perceived parental attitudes. Peer norms vary much more from drug to drug. The net effect of these facts is likely to be that peer norms have a much greater chance of explaining variability in the respondent's own individual attitudes or use than parental norms, simply because the peer norms vary more.

- Despite there being less variability in parental attitudes, the ordering of drug use behaviors is much the same for them as for peers (e.g., among the illicit drugs asked about, the highest frequencies of perceived disapproval are for trying LSD, while the lowest frequencies are for trying marijuana).

- A comparison with the seniors' own attitudes regarding drug use (see Figures 22 and 23) reveals that on the average they are much more in accord with their peers than with their parents. The differences between seniors' own disapproval ratings and those attributed to their parents tend to be large, with parents seen as more conservative overall in relation to every drug, licit or illicit. The largest difference occurs in the case of marijuana experimentation, where only 51% of seniors (in 1985) say they disapprove vs. 85% (of 1979 seniors) who said their parents would disapprove.

Trends in Perceptions of Parents' and Friends' Views

- Several important changes in the perceived attitudes of others have been taking place recently—and particularly among peers. These shifts are presented graphically in Figures 22 and 23. As can be seen in those figures, adjusted (dotted) trend lines have been introduced before 1980. This was done because we discovered that the deletion in 1980 of the questions about parents' attitudes—which up until then had been located immediately ahead of the questions about friends' attitudes—removed an artifactual depression of the ratings of friends' attitudes, a phenomenon known as a question-context effect. This effect was particularly evident in the trend lines dealing with alcohol use, where otherwise smooth lines showed abrupt upward shifts in 1980. It appears that when questions about parents' attitudes were present, respondents tended to understate peer disapproval in order to emphasize the difference in attitudes between their parents and their peers. In the adjusted lines, we have attempted to correct for that artifactual depression in the 1975, 1977, and 1979 scores.* We think the adjusted trend lines give a more accurate picture of the change taking place. For some reason, the question-context effect seems to have more influence on the questions dealing with cigarettes and alcohol than on those dealing with illicit drugs.

- For each level of marijuana use—trying once or twice, occasional use, regular use—there had been a drop in perceived disapproval for both parents and friends up until 1977 or 1978. We know from our other findings that these perceptions correctly reflected actual shifts in the attitudes of their peer groups—that is, that acceptance of marijuana was in fact increasing among seniors (see Figure 22). There is little reason to suppose such perceptions are less accurate in reflecting shifts in parents' attitudes. Therefore, we conclude that the social norms regarding marijuana use among adolescents had been relaxing before 1979. However, consistent with the seniors' reports about their own attitudes, there has been a sharp reversal in peer norms regarding all levels of marijuana use and it continued in 1985.

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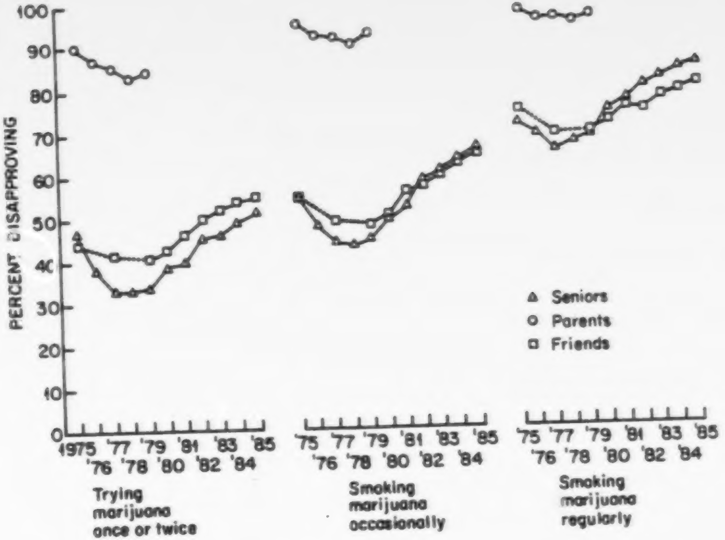
*The correction evolved as follows: We assumed that a more accurate estimate of the true change between 1979 and 1980 could be obtained by taking an average of the changes observed in the year prior and the year subsequent, rather than by taking the observed change (which we knew to contain the effect of a change in question context). We thus calculated an adjusted 1979-1980 change score by taking an average of one half the 1977-1979 change score (our best estimate of the 1978-79 change) plus the 1980-1981 change score. This estimated change score was then subtracted from the observed change score for 1979-1980, the difference being our estimate of the amount by which peer disapproval of the behavior in question was being understated because of the context in which the questions occurred prior to 1980. The 1975, 1977, and 1979 observations were then adjusted upward by the amount of that correction factor. (Table 19 shows the correction factors in the first column.)

FIGURE 22a

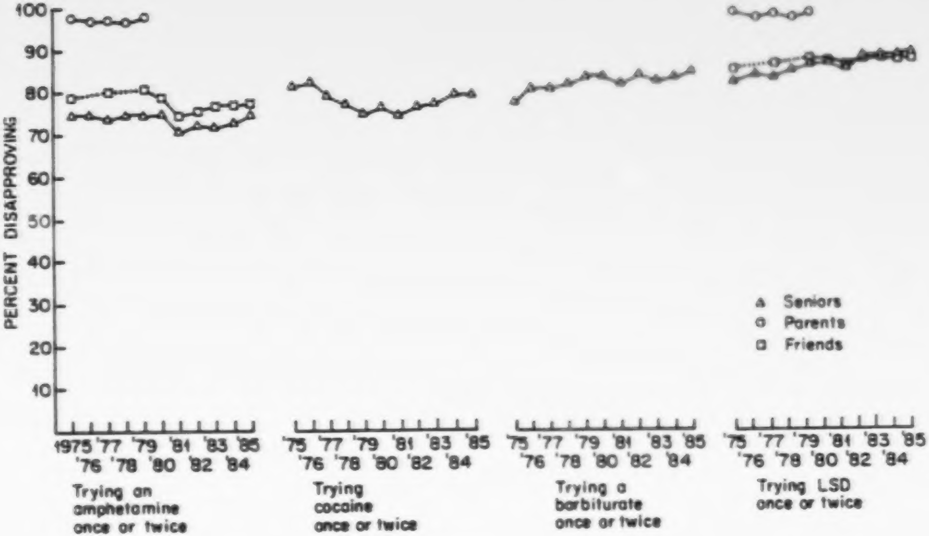
Trends in Disapproval of Illicit Drug Use
Seniors, Parents, and Peers



NOTE: Points connected by dotted lines have been adjusted because of lack of comparability of question-context among administrations. (See text for discussion.)

FIGURE 22b

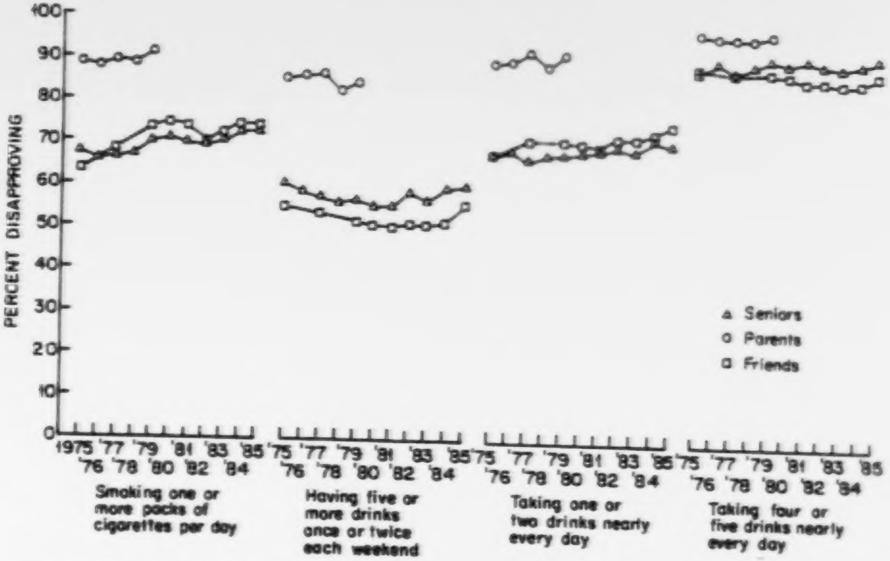
Trends in Disapproval of Illicit Drug Use
Seniors, Parents, and Peers



NOTE: Points connected by dotted lines have been adjusted because of lack of comparability of question-context among administrations. (See text for discussion.)

FIGURE 23

Trends in Disapproval of Licit Drug Use
Seniors, Parents, and Peers



NOTE: Points connected by dotted lines have been adjusted because of lack of comparability of question-context among administrations. (See text for discussion.)

- Until 1979 there had been relatively little change in either self-reported or perceived peer attitudes toward amphetamine use, but in 1981 both measures showed significant and parallel dips in disapproval (as use rose sharply). Since 1981 disapproval has been easing back up toward the earlier levels (as use has declined), though perceived disapproval among friends did not rise any further in 1985 despite a continuing increase in self-reported disapproval.

- Peer disapproval of LSD use has been inching upward since 1975.

- One of the larger changes in perceived peer norms has occurred in relation to regular cigarette smoking. The proportion of seniors saying that their friends would disapprove of them smoking a pack-a-day or more rose from 64% (adjusted version) in 1975 to 74% in 1980. In the several years following, peer disapproval eased back a percent or two, only to begin rising again in 1984. Overall, since 1980 peer disapproval has fluctuated within a fairly narrow range.

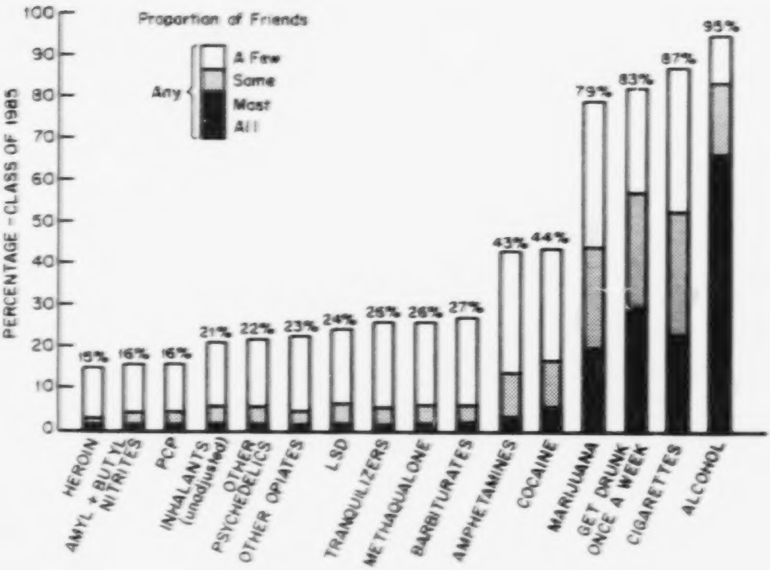
- For alcohol, perceived peer norms have moved pretty much in parallel with seniors' statements about their personal disapproval. Heavy daily drinking is seen as remaining disapproved of by the great majority (88% in 1985), with little systematic change over the decade. Weekend binge drinking showed some modest decline in disapproval up through 1980. It then remained level for about four years (while personal disapproval was increasing) until this year, when there was a significant 5% increase in disapproval for peers. (Recall that this form of episodic heavy drinking began to decline for the first time in 1984 and continued to decline in 1985.) While experimenting with alcohol is still accepted by the great majority (80%), there was a significant decline of 3% in this figure in 1985.

Exposure to Drug Use by Friends and Others

It is generally agreed that much of youthful drug use is initiated through a peer social-learning process; and research has shown a high correlation between an individual's illicit drug use and that of his or her friends. Such a correlation can, and probably does, reflect several different causal patterns: (a) a person with friends who use a drug will be more likely to try the drug; (b) conversely, the individual who is already using a drug will be likely to introduce friends to the experience; and (c) one who is already a user is more likely to establish friendships with others who also are users.

FIGURE 24

Proportion of Friends Using Each Drug as Estimated by Seniors, in 1985



Given the potential importance of exposure to drug use by others, we felt it would be useful to monitor seniors' association with others taking drugs, as well as seniors' perceptions about the extent to which their friends use drugs. Two sets of questions, each covering all or nearly all of the categories of drug use treated in this report, asked seniors to indicate (a) how often during the past twelve months they were around people taking each of the drugs to get high or for "kicks," and (b) what proportion of their own friends use each of the drugs. (The questions dealing with friends' use are shown in Table 20. The data dealing with direct exposure to use may be found in Table 21.) Obviously, responses to these two questions are highly correlated with the respondents' own drug use; thus, for example, seniors who have recently used marijuana are much more likely to report that they have been around others getting high on marijuana, and that most of their friends use it.

Exposure to Drug Use in 1985

- A comparison of responses about friends' use, and about being around people in the last twelve months who were using various drugs to get high, reveals a high degree of correspondence between these two indicators of exposure. For each drug, the proportion of respondents saying "none" of their friends use it is fairly close to the proportion who say that during the last twelve months they have not been around anyone who was using that drug to get high. Similarly, the proportion saying they are "often" around people getting high on a given drug is roughly the same as the proportion reporting that "most" or "all" of their friends use that drug.

- Reports of exposure and friends' use closely parallel the figures on seniors' own use (compare Figures 2 and 24). It thus comes as no surprise that the highest levels of exposure involve alcohol; a majority (60%) say they are "often" around people using it to get high. What may come as a surprise is that fully 30% of all seniors say that most or all of their friends go so far as to get drunk at least once a week. (This is consistent, however, with the fact that 37% said they personally had taken five or more drinks in a row at least once during the prior two weeks.)

- The drug to which students are next most frequently exposed is marijuana. Only about one in four (27%) reports no exposure during the year. Some 24% are "often" around people using it to get high, and another 27% are exposed "occasionally." But only one in five (20%) now say that most or all of their friends smoke marijuana.

- Amphetamines, the most widely used class of illicit drugs other than marijuana, is also the one to which seniors are next most often exposed. Some 41% of all

TABLE 20

Trends in Proportion of Friends Using Drugs

(Entries are percentages)

Q. How many of your friends would you estimate...	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84 – '85 change
Smoke marijuana												
% saying none	17.0	17.1	14.1	13.9	12.4	13.6	17.0	15.6	19.7	22.3	20.5	– 1.8
% saying most or all	30.3	30.6	32.3	35.3	35.5	31.3	27.7	23.8	21.7	18.3	19.8	+ 1.5
Use inhalants												
% saying none	75.7	81.4	81.1	80.0	80.9	82.2	83.5	81.6	83.9	80.7	78.8	– 1.9
% saying most or all	1.1	1.1	1.0	1.1	1.1	1.2	0.9	1.3	1.1	1.1	1.5	+0.4
Use nitrites												
% saying none	NA	NA	NA	NA	78.4	81.0	82.6	82.5	85.5	85.0	84.4	–0.6
% saying most or all	NA	NA	NA	NA	1.9	1.3	1.2	0.9	0.7	1.2	1.0	–0.2
Take LSD												
% saying none	63.5	69.4	68.1	70.1	71.1	71.9	71.5	72.2	76.0	76.1	75.6	–0.5
% saying most or all	2.7	2.8	3.0	2.0	1.9	1.8	2.2	2.4	1.4	2.0	1.5	–0.5
Take other psychedelics												
% saying none	58.8	69.7	68.6	70.8	71.8	71.8	73.7	74.4	77.9	78.7	78.0	–0.7
% saying most or all	4.7	3.0	2.8	2.0	2.2	2.3	2.1	1.9	1.8	1.9	1.4	–0.5
Take PCP												
% saying none	NA	NA	NA	NA	72.3	77.8	82.8	82.7	85.8	85.8	84.1	– 1.7
% saying most or all	NA	NA	NA	NA	1.7	1.6	0.9	0.9	1.1	1.1	1.2	+0.1
Take cocaine												
% saying none	66.4	71.2	69.9	66.8	61.1	58.4	59.9	59.3	62.4	61.1	56.2	–4.9ss
% saying most or all	3.4	3.2	3.6	4.0	6.0	6.1	6.3	4.9	5.1	5.1	5.8	+0.7
Take heroin												
% saying none	84.8	86.4	87.1	85.7	87.1	87.0	87.5	88.8	88.0	87.0	85.5	– 1.5
% saying most or all	0.7	0.8	0.7	0.9	0.5	1.0	0.5	0.7	0.8	0.8	0.9	+0.1
Take other narcotics												
% saying none	71.2	75.9	76.3	76.8	76.9	77.6	76.9	76.1	79.2	78.6	77.2	– 1.4
% saying most or all	2.1	2.2	1.7	1.4	1.5	1.7	1.5	1.4	1.4	1.6	1.4	–0.2

(Table continued on next page)

TABLE 20 (cont.)

Trends in Proportion of Friends Using Drugs

(Entries are percentages)

Q. How many of your friends would you estimate...	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84 – '85 change
Take amphetamines												
% saying none	49.0	57.8	58.7	59.3	59.3	56.1	51.2	49.4	53.9	54.9	56.7	+ 1.8
% saying most or all	5.9	5.8	4.1	4.7	4.3	4.8	6.4	5.4	5.1	4.5	3.4	− 1.1
Take barbiturates												
% saying none	55.0	63.7	65.3	67.5	69.3	69.5	68.9	68.7	71.7	73.4	72.9	−0.5
% saying most or all	4.3	3.5	3.0	2.3	2.1	2.6	2.1	1.8	1.7	1.7	1.6	−0.1
Take quaaludes												
% saying none	68.3	73.0	71.7	73.0	72.3	67.5	65.0	64.5	70.3	73.9	74.0	+0.1
% saying most or all	3.0	1.8	2.9	2.2	2.8	3.6	3.6	2.6	2.6	1.7	1.3	−0.4
Take tranquilizers												
% saying none	54.4	63.7	62.2	65.2	68.0	70.3	70.5	70.1	73.3	73.4	74.2	+0.8
% saying most or all	3.5	3.1	2.7	1.8	2.0	1.9	1.4	1.1	1.2	1.5	1.2	−0.3
Drink alcoholic beverages												
% saying none	3.3	4.9	5.6	5.1	4.8	3.9	5.3	4.3	4.5	5.4	5.4	0.0
% saying most or all	68.4	64.7	66.2	68.9	68.5	68.9	67.7	69.7	69.0	66.6	66.0	−0.6
Get drunk at least once a week												
% saying none	17.6	19.3	19.0	18.0	16.7	16.9	18.2	16.9	16.1	18.5	17.5	− 1.0
% saying most or all	30.1	28.6	27.6	30.2	32.0	30.1	28.4	29.9	31.0	29.6	29.9	+0.3
Smoke cigarettes												
% saying none	4.8	6.3	6.3	6.9	7.9	9.4	11.5	11.7	13.0	14.0	13.0	− 1.0
% saying most or all	41.5	38.7	33.9	32.2	28.6	23.3	22.4	24.1	22.4	19.2	22.8	+ 3.6ss
Approx. N =	(2640)	(2929)	(3184)	(3247)	(2933)	(2987)	(3307)	(3303)	(3095)	(2945)	(2971)	

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. NA indicates data not available.

TABLE 21
Trends in Exposure to Drug Use
(Entries are percentages)

Q. During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change
Marijuana												
% saying not at all	NA	20.5	19.0	17.3	17.0	18.0	19.8	22.1	23.8	25.6	26.5	+0.9
% saying often	NA	32.5	37.0	39.0	38.9	33.8	33.1	28.0	26.1	24.8	24.2	−0.6
LSD												
% saying not at all	NA	78.8	80.0	81.9	81.9	82.8	82.6	83.9	86.2	87.5	86.8	−0.7
% saying often	NA	2.2	2.0	1.8	2.0	1.4	2.0	1.9	1.4	1.5	1.3	−0.2
Other psychedelics												
% saying not at all	NA	76.5	76.7	76.7	77.6	79.6	82.4	83.2	86.9	87.3	87.5	+0.2
% saying often	NA	3.1	3.2	2.9	2.2	2.2	2.0	2.6	1.1	1.7	1.4	−0.3
Cocaine												
% saying not at all	NA	77.0	73.4	69.8	64.0	62.3	63.7	65.1	66.7	64.4	61.7	−2.7
% saying often	NA	3.0	3.7	4.6	6.8	5.9	6.6	6.6	5.2	6.7	7.1	+0.4
Heroin												
% saying not at all	NA	91.4	90.3	91.8	92.4	92.6	93.4	92.9	94.9	94.0	94.5	+0.5
% saying often	NA	0.8	1.1	0.9	0.7	0.4	0.6	1.0	0.7	1.1	0.5	−0.6s
Other narcotics												
% saying not at all	NA	81.9	81.3	81.8	82.0	80.4	82.5	81.5	82.7	82.0	81.6	−0.4
% saying often	NA	1.8	2.4	2.0	1.7	1.7	1.7	2.4	2.2	2.0	1.8	−0.2
Amphetamines												
% saying not at all	NA	59.6	60.3	60.9	58.1	50.2	50.5	49.8	53.9	55.0	59.0	+4.0ss
% saying often	NA	6.8	7.9	6.7	7.4	8.3	12.1	12.3	10.1	9.0	6.5	−2.5ss
Barbiturates												
% saying not at all	NA	69.0	70.0	73.5	73.6	74.8	74.1	74.3	77.5	78.8	81.1	+2.3
% saying often	NA	4.5	5.0	3.4	3.3	3.4	4.0	4.3	3.0	2.7	1.7	−1.0s
Tranquilizers												
% saying not at all	NA	67.7	66.0	67.5	67.5	70.9	71.0	73.4	76.5	76.9	76.6	−0.3
% saying often	NA	5.5	6.3	4.9	4.3	3.2	4.2	3.5	2.9	2.9	2.2	−0.7
Alcoholic beverages												
% saying not at all	NA	6.0	5.6	5.5	5.2	5.3	6.0	6.0	6.0	6.0	6.0	0.0
% saying often	NA	57.1	60.8	60.8	61.2	60.2	61.0	59.3	60.2	58.7	59.5	+0.8
Approx. N =	(NA)	(3249)	(3579)	(3682)	(3253)	(3259)	(3608)	(3645)	(3334)	(3238)	(3252)	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. NA indicates data not available.

seniors have been around someone using them to get high over the past year, and 7% say they are "often" around people doing this.

- Nearly as many (38%) now report being exposed to cocaine use during the prior year.
- For the remaining illicit drugs there are far lower rates, with any exposure to use in the past year ranging from 23% for tranquilizers, down to 6% for heroin.
- More than two of every five seniors (41%) report no exposure to illicit drugs other than marijuana.
- Regarding cigarette smoking, it is interesting to note that only about one in every four seniors (23%) reports that most or all of his or her friends smoke.

Recent Trends in Exposure to Drug Use

- During the two-year interval from 1976 to 1978, seniors' reports of exposure to marijuana use increased in just about the same proportion as percentages of actual monthly use. In 1979 both exposure to use and actual use stabilized; and since 1979 both have been dropping, though rather little in 1985 consistent with the leveling in use. The proportion saying they are often around people using marijuana decreased from 39% in 1979 to 24% in 1985—a drop of more than one-third in the past six years.
- Cocaine had a consistent increase from 1976 to 1979 in the proportions exposed to users. From 1979 to 1983 there was a slight drop in exposure to use coinciding with the slight drop in self-reported use; but in 1984 and again in 1985 there were further increases in exposure to use.
- From 1979 to 1983 there had been statistically significant decreases in exposure to others (including close friends) using tranquilizers, and psychedelics other than LSD (including PCP) which coincide with continued declines in the self-reported use of these classes of drugs. There has been little or no further change since 1983, however, in exposure to the use of these substances.
- There also had been a gradual decrease in exposure to barbiturates and LSD from 1975 through 1980. However, exposure to the use of both of these drugs then plateaued for two years, as did the usage figures. Both drugs have shown further decline in use since 1981, and both resumed their decline in exposure to use.

- Trend data are only available since 1979 on friends' use of PCP or the nitrites. For both drugs, exposure to friends' use had dropped significantly between 1979 and 1983. Only half as many seniors in 1983 (14%) said any of their friends used PCP than said so in 1979 (28%). The comparable drop for nitrites was from 22% to 15%. In 1984 there was no further drop in exposure to either drug, however, and in 1985 exposure to PCP increased slightly as did self-reported use.

- The proportion having some friends who used amphetamines rose from 41% to 51% between 1979 and 1982—paralleling the sharp increase in reported use over that period. The proportion saying they were around people using amphetamines "to get high or for kicks" also jumped substantially between 1980 and 1982 (by 9%).* It then fell back 9% in the last three years (as actual use has declined).*

- Between 1978 and 1981 methaqualone use rose, as did the proportion of seniors saying some of their friends used. A decline in both use and exposure started in 1982 and by 1985 there were 9% fewer seniors saying they had any friends who use quaaludes (from 35% to 26% between 1981 and 1985).

- The proportion saying that "most or all" of their friends smoke cigarettes dropped steadily and substantially between 1976 and 1981, from 37% to 22%. (During this period actual use dropped markedly, and more seniors perceived their friends as disapproving regular smoking.) Between 1981 and 1983, friends' use (as well as self-reported use) remained stable, in 1984 the declines in both measures resumed, but in 1985 both measures showed a reversal. In 1977, the peak year, 34% said most or all of their friends smoked; in 1985, 23% made the same statement.

- The proportion saying most or all of their friends get drunk at least once a week had been increasing steadily, between 1976 and 1979, from 27% to 32%—during a period in which the prevalence of occasional heavy drinking was rising by about the same amount. After that, there was little change in either measure until 1984, when both declined for the first time. In

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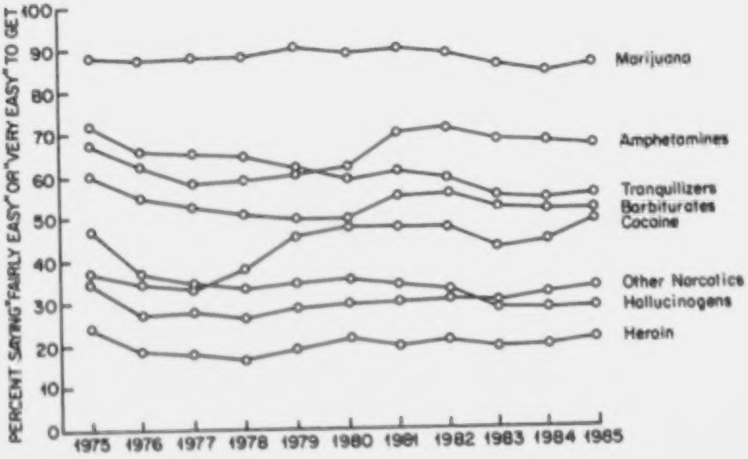
*This finding was important, since it indicated that a substantial part of the increase observed in self-reported amphetamine use was due to things other than simply an increase in the use of over-the-counter diet pills or stay-awake pills, which presumably are not used to get high. Obviously more young people were using stimulants for recreational purposes. There still remained the question, of course, of whether the active ingredients in those stimulants really were amphetamines.

FIGURE 25

Trends in Perceived Availability of Drugs



1985 reported friends' use did not decline, though self-reported use did. But without question, what remains the most impressive fact here is that nearly a third of all high school seniors (30% in 1985) say that most or all of their friends get drunk at least once a week!

Implications for Validity of Self-Reported Usage Questions

- We have noted a high degree of correspondence in the aggregate level data presented in this report among seniors' self-reports of their own drug use, their reports concerning friends' use, and their own exposure to use. Drug-to-drug comparisons in any given year across these three types of measures tend to be highly parallel, as do the changes from year to year.* We take this consistency as additional evidence for the validity of the self-report data, and of trends in the self-report data, since there should be less reason to distort answers on friends' use, or general exposure to use, than to distort the reporting of one's own use.

Perceived Availability of Drugs

One set of questions asks for estimates of how difficult it would be to obtain each of a number of different drugs. The answers range across five categories from "probably impossible" to "very easy." While no systematic effort has been undertaken to assess directly the validity of these measures, it must be said that they do have a rather high level of face validity—particularly if it is the subjective reality of "perceived availability" which is purported to be measured. It also seems quite reasonable to us to assume that perceived availability tracks actual availability to some extent.

Perceived Availability in 1985

- There are substantial differences in the reported availability of the various drugs. In general, the more widely used drugs are reported to be available by the highest proportion of the age group, as would be expected (see Table 22 and Figure 25).
- Marijuana appears to be almost universally available to high school seniors; some 86% report that they think it would be "very easy" or "fairly easy" for them to

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*Those minor instances of non-correspondence may well result from the larger sampling errors in our estimates of these environmental variables, which are measured on a sample size one-fifth the size of the self-reported usage measures.

TABLE 22

Trends in Reported Availability of Drugs

Q. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	Percent saying drug would be "Fairly easy" or "Very easy" for them to get[a]											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change
Marijuana	87.8	87.4	87.9	87.8	90.1	89.0	89.2	88.5	86.2	84.6	85.5	+0.9
LSD	46.2	37.4	34.5	32.2	34.2	35.3	35.0	34.2	30.9	30.6	30.5	−0.1
Some other psychedelic	47.8	35.7	33.8	33.8	34.6	35.0	32.7	30.6	26.6	26.6	26.1	−0.5
Cocaine	37.0	34.0	33.0	37.8	45.5	47.9	47.5	47.4	43.1	45.0	48.9	+3.9s
Heroin	24.2	18.4	17.9	16.4	18.9	21.2	19.2	20.8	19.3	19.9	21.0	+1.1
Some other narcotic (including methadone)	34.5	26.9	27.8	26.1	28.7	29.4	29.6	30.4	30.0	32.1	33.1	+1.0
Amphetamines	67.8	61.8	58.1	58.5	59.9	61.3	69.5	70.8	68.5	68.2	66.4	−1.8
Barbiturates	60.0	54.4	52.4	50.6	49.8	49.1	54.9	55.2	52.5	51.9	51.3	−0.6
Tranquilizers	71.8	65.5	64.9	64.3	61.4	59.1	60.8	58.9	55.3	54.5	54.7	+0.2
Approx. N =	(2627)	(3163)	(3562)	(3598)	(3172)	(3240)	(3578)	(3602)	(3385)	(3269)	(3274)	

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

[a] Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, and (5) Very easy.

get—31% more than the number who report ever having used it.

- After marijuana, the students indicate that the psychotherapeutic drugs are the most available to them: amphetamines are seen as available by 66%, tranquilizers by 55%, and barbiturates by 51%.

- About half of the seniors (49%) see cocaine as readily available to them.

- LSD, other psychedelics, and opiates other than heroin are reported as available by only about one of every three or four seniors (31%, 26%, and 33%, respectively).

- Heroin is seen by the fewest seniors (21%) as being easy to get.

- The majority of "recent users" of nearly all drugs—those who have illicitly used the drug in the past year—feel that it would be easy for them to get that same type of drug. (Data not shown here.)

  There is some further variation by drug class, however. Most (from 79% to 97%) of the recent users of marijuana, cocaine, amphetamines, barbiturates, and tranquilizers feel they could get those same drugs easily. Smaller majorities of those who used LSD (70%), other opiates (66%), or heroin (53%) feel it would be easy for them to get those drugs again.

Trends in Perceived Availability

- Marijuana, for the first time since the study was begun in 1975, showed a small but statistically significant decline in perceived availability (down 3.9%) between 1982 and 1984, undoubtedly due to the reduced proportion of seniors who have friends who use. There has been little further change since then and 86% of the class of 1985 think marijuana would be easy to get.

- Amphetamines showed a full 11% jump in availability between 1979 and 1982; but availability has dropped back by 4% in the three years since.

- The perceived availability of barbiturates also jumped about 6% between 1980 and 1982, but also dropped back by 4% in the subsequent three years.

- Between 1977 and 1980 there was a substantial (15%) increase in the perceived availability of cocaine (see Figure 25 and Table 22). Among recent cocaine users there also was a substantial increase observed over that three year interval (data not shown). Availability then levelled, dropped some in 1983 and 1984, before rising significantly (by 4%) in 1985.

- The availability of tranquilizers declined steadily between 1978 and 1980, held steady for two years, and then declined another 4% between 1982 and 1985.

- The perceived availability of LSD and other psychedelics dropped sharply between 1975 and 1978. LSD availability has decreased since 1978 by less than 2% (from 32.2% to 30.5%), but the easy availability of other psychedelics showed a further decline of an additional 8% by 1985 (from 34% to 26%) —a period during which the use of PCP dropped substantially.

- There is no evidence of any systematic change in the perceived availability of heroin since 1976; and other opiates also showed stability through 1983. A modest rise in availability then began in 1984, prefacing a rise in use in 1985.

- All these trends are similar among recent users.

YOUNG ADULTS
POST HIGH SCHOOL

PREVALENCE OF DRUG USE AMONG YOUNG ADULTS

As is described in the introduction to this report, the Monitoring the Future study has followed representative samples from each graduating class beginning with the Class of 1976. Two matched panels, of roughly 1200 seniors each, are selected from each graduating class—one panel being surveyed on every even-numbered year thereafter, the other being surveyed on every odd-numbered year. Thus, in a given year, the study encompasses one of the panels from each previously participating senior class. In 1985, this meant that representative samples of the Classes of 1976 through 1984 were surveyed by mail. In this section we present the results of that survey: results which should accurately characterize the approximately 85% of young adults in the class cohorts one to nine years beyond high school who are high school graduates. The high school dropout segment missing from the senior year surveys is, of course, missing from the follow-up segments, as well.

Figures 26 through 38 provide prevalence data for all age groups covered, up through those who are nine years beyond high school (modal age of 27). These figures also show the trend data for seniors and for graduates who are up to eight years past high school (modal age of 26). Age groups have been paired into two-year intervals to increase the number of cases, and thus the reliability, of each point estimate. For obvious reasons, trends on the youngest age bands can be calculated for the longest period of time. As the years pass and the earlier class cohorts get older, new age groups can be added to the figures.

A number of interesting findings emerge from these data. *

Prevalence of Drug Use in 1985: Young Adults

- For virtually all drugs, and for illicit drug use taken as a whole, older age groups exhibit higher levels of lifetime experience (data not shown), but some age groups show levels of active or current use which are no higher than they were in high school. For example,

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*In this section on post-high school drug use, we note some differences that seem to be consistently associated with age. We recognize that the separation of age effects from period or cohort effects is a difficult methodological task, and have dealt extensively with that issue elsewhere (O'Malley, P.M., Bachman, J.G., & Johnston, L.D. "Period, age, and cohort effects on substance use among American youth: 1976-1982," American Journal of Public Health, 1984, 74, 682-688). In this monograph we take a more descriptive approach, presenting the trend data along with those interpretations that we think are most reasonable.

among 25 and 26 year olds, lifetime experience with any illicit drug approaches 80%, vs. 61% for high school seniors. However, the different age groups all have about the same annual and monthly prevalence rates on this index of overall illicit drug involvement.

- A similar pattern exists for marijuana (including daily use) and for tranquilizers. That is, active rates of use for young adults past high school are about what they are for seniors in high school. (For marijuana, the lifetime prevalence reached by respondents in their mid-twenties (in 1985) is between 70% and 75%.)

- It is perhaps particularly significant that daily marijuana use is not any lower among the older age groups than among high school seniors. This means that up through age 27, at least, there is no evidence of a fall-off in active daily use as a function of age.

- The statistics on the use of any illicit drug other than marijuana behave in a somewhat different fashion, however. Like marijuana and the any-illicit-drug-use index, lifetime rates on this index also show an appreciable rise with age, with peak levels seeming to be reached about five or six years past high school. For example, in 1985 roughly 55% of those five or six years past high school had tried some illicit drug other than marijuana during their lifetime, and about the same statistics hold for those seven, eight, and nine years out. This compares with between 36% and 43% across all seniors surveyed in the past decade.

  However, the annual usage statistics are also slightly higher in the post high school age groups than among seniors. As the next several paragraphs illustrate, most of the drugs which comprise this category show a decline with age in annual prevalence. Thus, the one which shows an appreciable increase with age—namely, cocaine—must account for nearly all of the increase in the general category.

- Several classes of drugs show lower rates of current use among the older age groups than among seniors. LSD in recent years has shown lower 30-day prevalence rates for the older ages than for seniors. (Annual prevalence rates also tend to be lower at present, though this has not always been true—reflecting a sharper decrease in use among the older age groups than among seniors.) We should add, however, that all of these prevalence rates are very low, and thus the differences are quite small.

- For stimulants, lifetime prevalence is much higher among the older age groups—again reflecting the addition of new initiates in the early twenties (data not shown). However, active use as reflected in the annual prevalence figure is somewhat lower among the older age groups at present, again as a result of a sharper decline in use in the older ages than has occurred among seniors.

- For methaqualone, lifetime prevalence rises appreciably with age, but there is little age-related difference in annual prevalence at present, though there may have been in earlier years.

- Barbiturates are similar to stimulants and methaqualone in that lifetime prevalence again rises appreciably with age, but slightly different in that active non-medical use after high school has always been appreciably lower than during high school.

- Opiates other than heroin behave very similarly to barbiturates—some increase in lifetime prevalence with age, with active nonmedical use being lower in the years after high school than during high school.

- Cocaine presents a somewhat unique case in that lifetime, annual, and current use all rise substantially with age. In 1985, lifetime prevalence by age 27 was roughly 40%, vs. 17% among today's high school seniors (and 10% among the 27-year-old cohort when they were seniors in 1976). Annual prevalence for 27-year-olds today is about 20% and 30-day prevalence around 10%—again, appreciably higher than for the 1985 seniors. Clearly this is a drug which is used much more frequently among people in their twenties than among those in their late teens; and this fact distinguishes it from all of the other illicit drugs.

- In the case of alcohol, lifetime prevalence varies rather little by age (obviously due to a "ceiling effect") but current use (in the past 30 days) does vary somewhat more by age, with a higher proportion of the older age groups drinking actively. Current daily drinking is also slightly higher in the older age groups.

  Occasions of heavy drinking in the two weeks prior to the survey shows a more complex pattern, with those 1 to 4 years beyond high school showing a higher prevalence of such behaviors than seniors, but with those 5 or more years beyond high school dropping back to rates actually lower than those observed in senior year. We have interpreted this as a curvilinear age effect, since it seems to replicate across years and graduating classes (see footnote earlier in this section for reference).

- Cigarette smoking shows an unusual pattern in relation to age, in that current smoking (30-day prevalence) increases moderately with age, but heavy daily smoking increases appreciably more in proportional terms. This means that relatively few new people are recruited to smoking past high school, but many who previously were moderate smokers move into a pattern of heavier consumption during early adulthood.

Sex Differences in Prevalence Among Young Adults

- Statistics on usage rates for young adults one to eight years beyond high school, combined, are given for the total sample and separately for males and females in Table 23.

- In general, it can be seen that most of the sex differences in drug use which pertained in high school may be found in this young adult sample as well. For example, somewhat more males than females report using any illicit drug during a given time interval, but the differences are not large. Males have higher annual prevalence rates in most of the illicit drugs—with the highest ratios pertaining for LSD, methaqualone, heroin, and opiates other than heroin.

- Other large sex differences are to be found in daily marijuana use (3.4% for females vs. 7.4% for males in 1985), daily alcohol use (3.6% vs. 10.4%), and occasions of drinking five or more drinks in a row in the prior two weeks (27% vs. 52%). The sex difference in occasions of heavy drinking is greater than in high school.

- The use of stimulants, which was slightly higher among females in high school, is slightly higher among males in this post high school period.

- One other small reversal from high school patterns is that tranquilizer use is slightly higher among females after high school, whereas it was slightly higher among males during high school.

- For cigarettes, smoking at the rate of half-a-pack per day is almost identical for males and females (20% vs. 21%, respectively), while smoking at all during the prior month is a little more different (31% vs. 34%), just as is true in high school.

TABLE 23

Prevalence of Use of Twelve Types of Drugs, 1985
Among Follow-Up Respondents 1-8 Years Beyond High School
by Sex

	Males	Females	Total
Approx. Wtd. N =	(2400)	(3000)	(5400)
Marijuana			
Annual	45.3	36.9	40.6
30-Day	29.6	21.1	24.9
Daily	7.4	3.4	5.2
LSD			
Annual	4.7	1.8	3.1
30-Day	1.1	0.4	0.7
Cocaine			
Annual	23.6	16.8	19.9
30-Day	10.6	7.2	8.7
Heroin			
Annual	0.4	0.1	0.2
30-Day	0.0	0.1	0.1
Other Opiates[a]			
Annual	4.4	3.0	3.6
30-Day	1.1	1.0	1.0
Stimulants, Adjusted[a]			
Annual	14.6	12.7	13.5
30-Day	5.3	5.0	5.1
Sedatives[a]			
Annual	4.3	3.3	3.8
30-Day	1.1	0.9	1.0
Barbiturates[a]			
Annual	3.1	2.4	2.7
30-Day	0.9	0.7	0.8
Methaqualone[a]			
Annual	2.2	1.5	1.8
30-Day	0.3	0.4	0.3
Tranquilizers[a]			
Annual	5.3	5.7	5.5
30-Day	1.8	1.8	1.8
Alcohol			
Annual	91.2	88.9	89.9
30-Day	82.5	71.5	76.4
Daily	10.4	3.6	6.7
5+ drinks in a row in past two weeks	51.9	26.9	38.1
Cigarettes			
30-Day	31.2	33.5	32.6
Daily (Any)	24.9	26.6	25.9
1/2 pack or more per day	20.0	21.0	20.6

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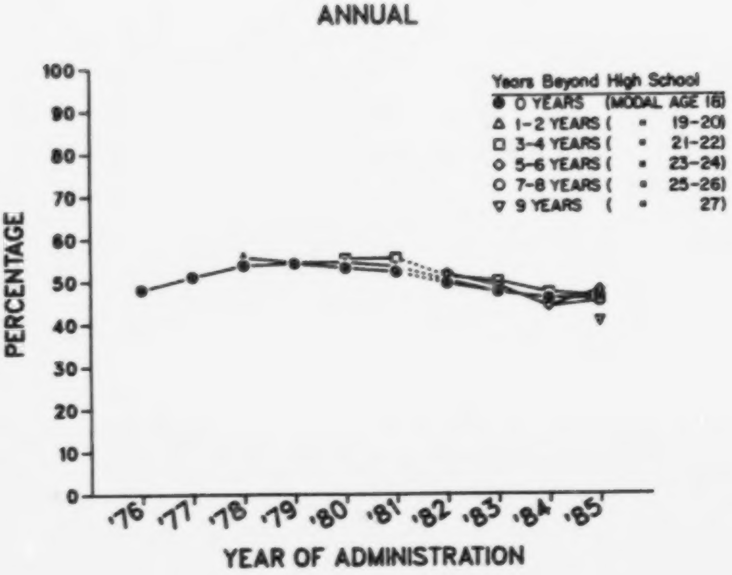
[a] Only drug use which was not under a doctor's orders is included here.

FIGURE 26

Any Illicit Drug: Trends in Use Among Young Adults
by Age Group

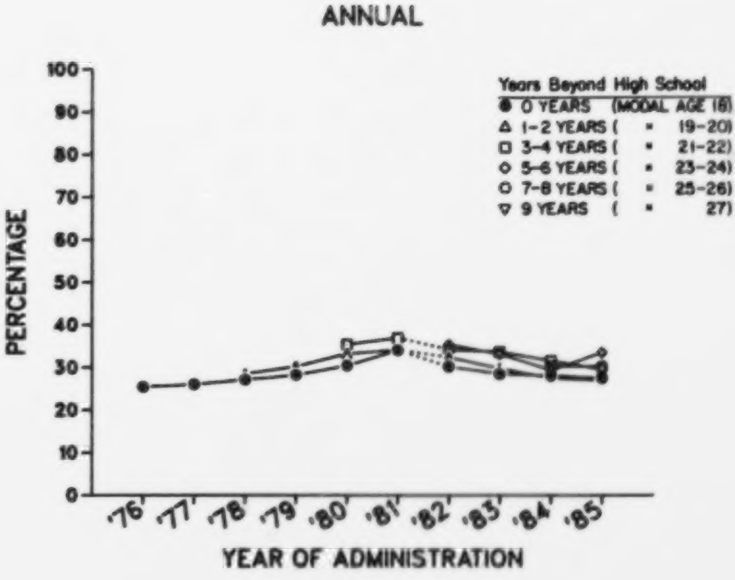


ANNUAL

NOTE. The dotted lines between 1981 and 1982 denote the change in the amphetamine question.

FIGURE 27

Any Illicit Drug Other than Marijuana: Trends in Use Among Young Adults
by Age Group



NOTE. The dotted lines between 1981 and 1982 denote the change in the amphetamine question.

FIGURE 28

Any Illicit Drug Other than Marijuana or Stimulants: Trends in Use Among Young Adults by Age Group

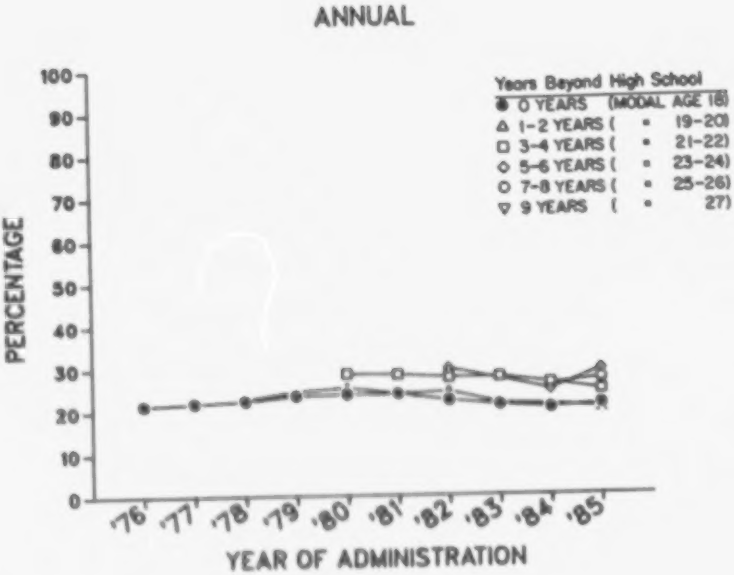


FIGURE 29a

Marijuana: Trends in Use Among Young Adults
by Age Group

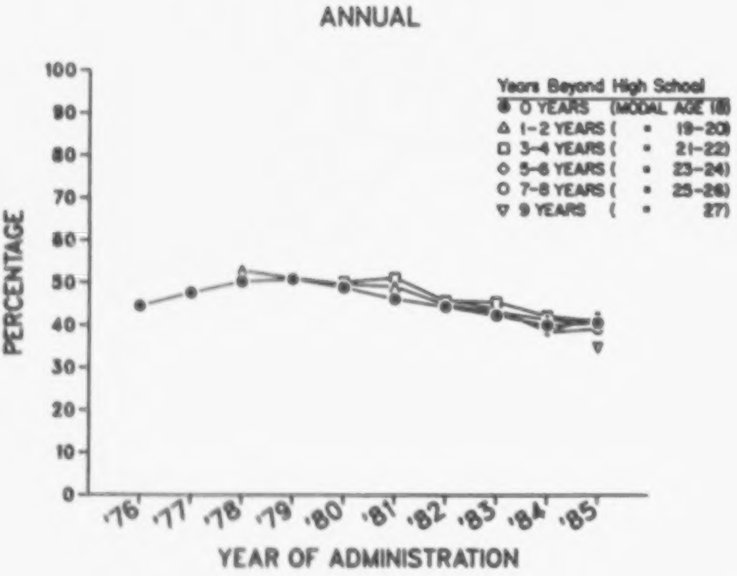


FIGURE 29b

Marijuana: Trends in Use Among Young Adults
by Age Group

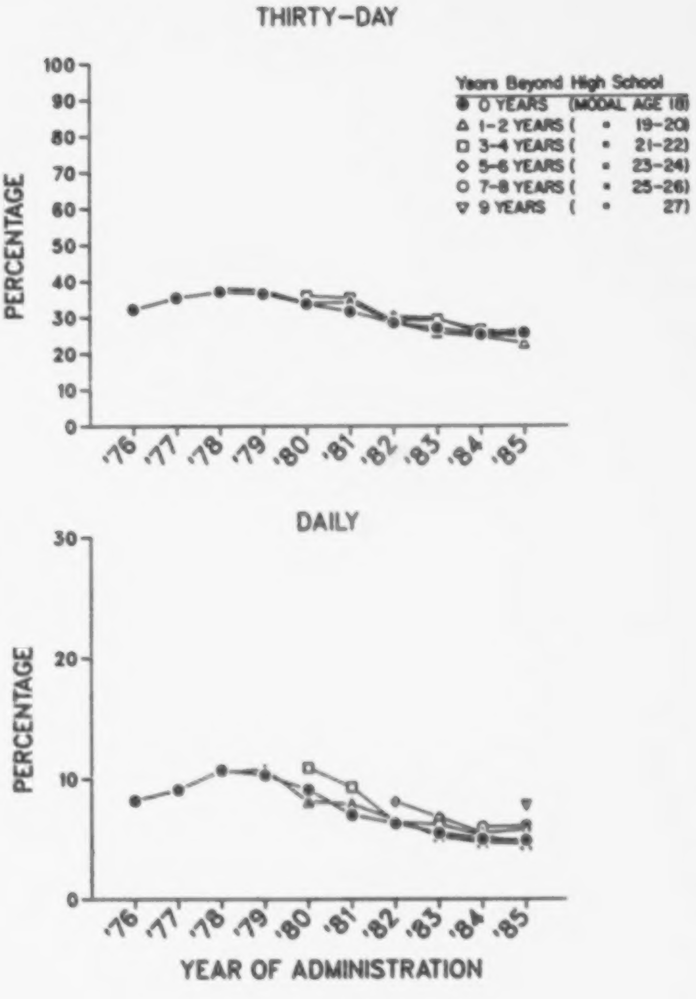


FIGURE 30

LSD: Trends in Use Among Young Adults
by Age Group

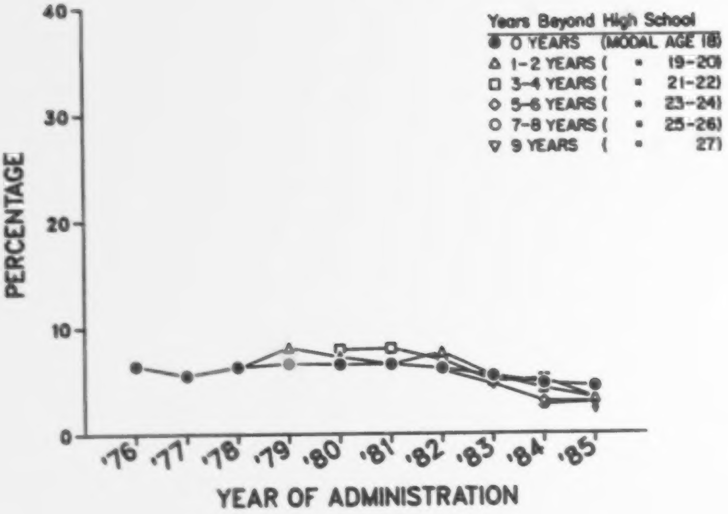


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FIGURE 31

Cocaine: Trends in Use Among Young Adults
by Age Group

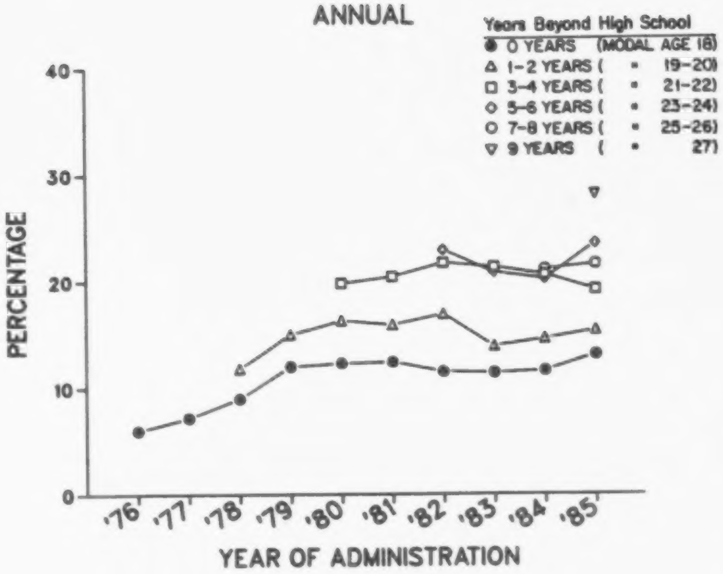

FIGURE 32

Other Opiates: Trends in Use Among Young Adults by Age Group

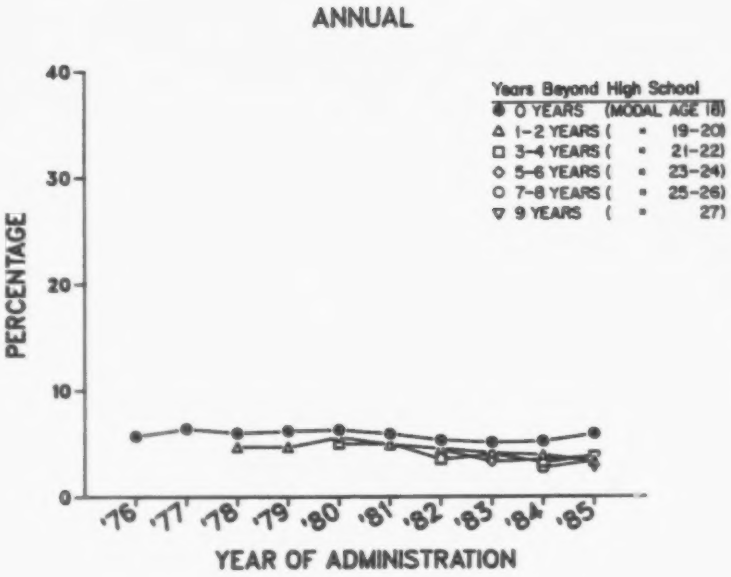

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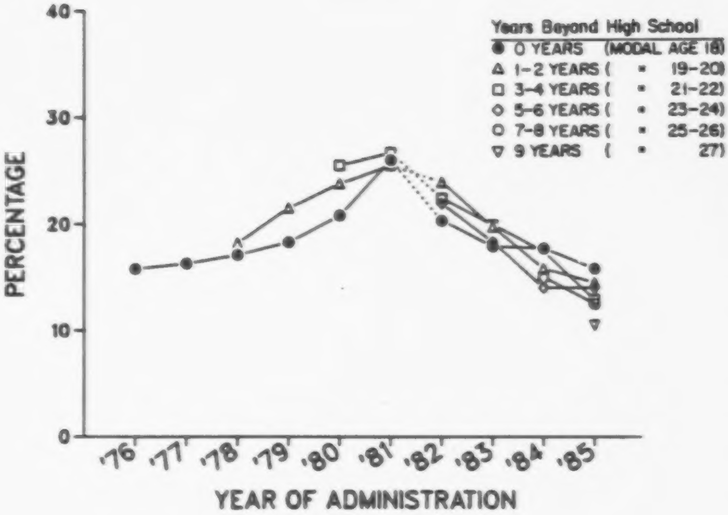
FIGURE 33

Stimulants: Trends in Use Among Young Adults
by Age Group



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NOTE. The dotted lines between 1981 and 1982 denote the change in the amphetamine question.

FIGURE 34

Barbiturates: Trends in Use Among Young Adults
by Age Group

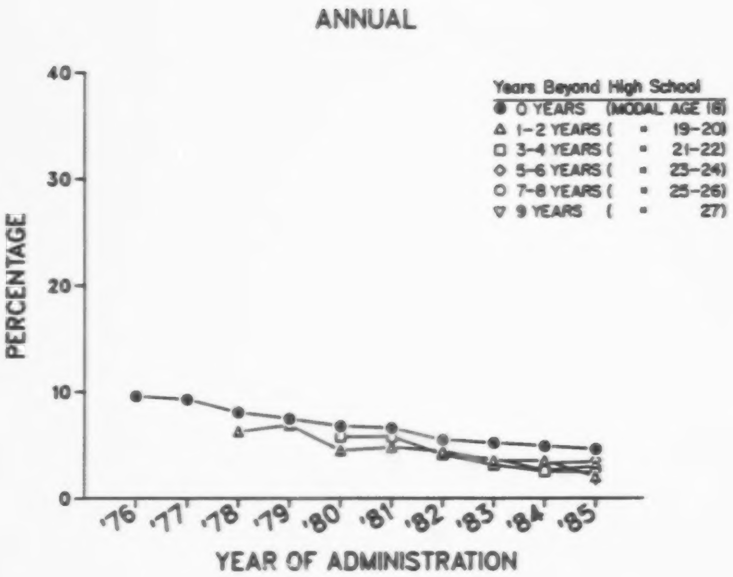

FIGURE 35

Methaqualone: Trends in Use Among Young Adults
by Age Group

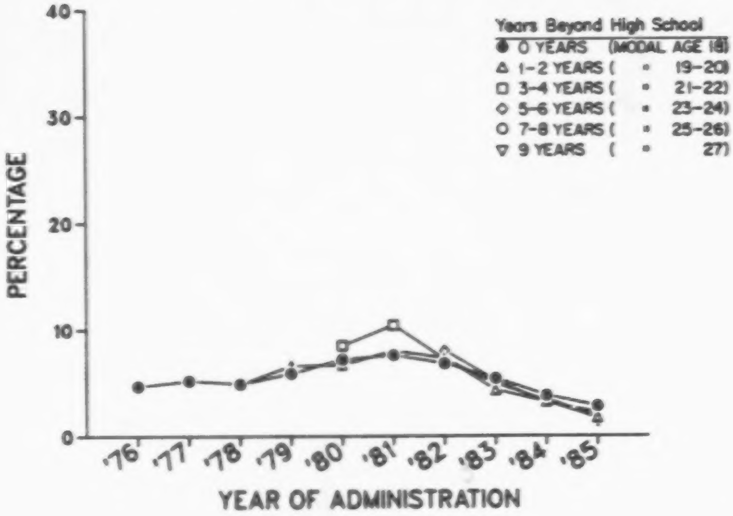
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FIGURE 36

Tranquilizers: Trends in Use Among Young Adults
by Age Group

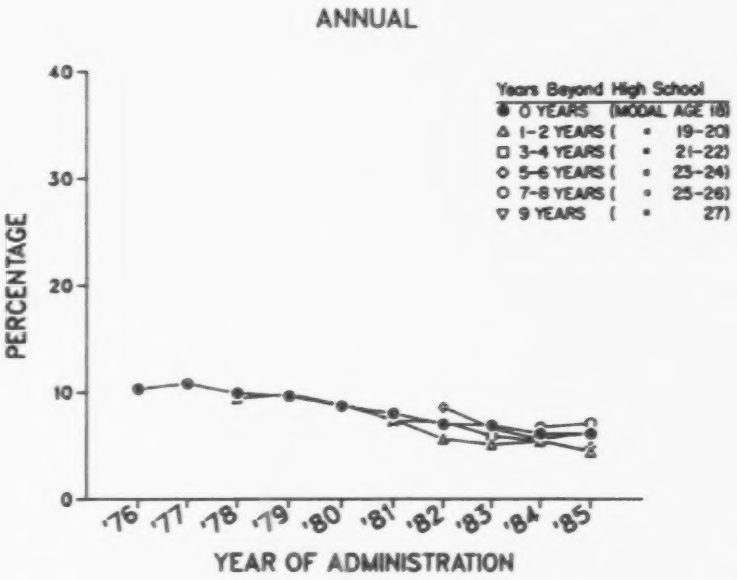

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FIGURE 37a

Alcohol: Trends in Use Among Young Adults
by Age Group

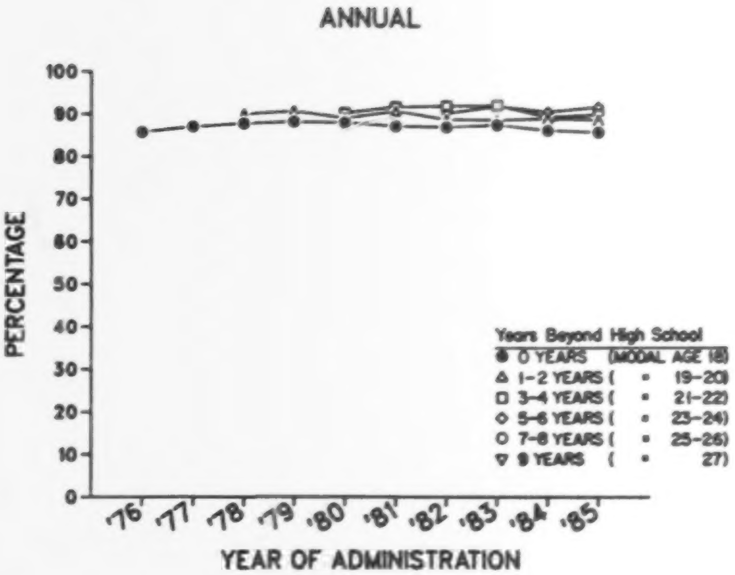

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FIGURE 37b

Alcohol: Trends in Use Among Young Adults
by Age Group

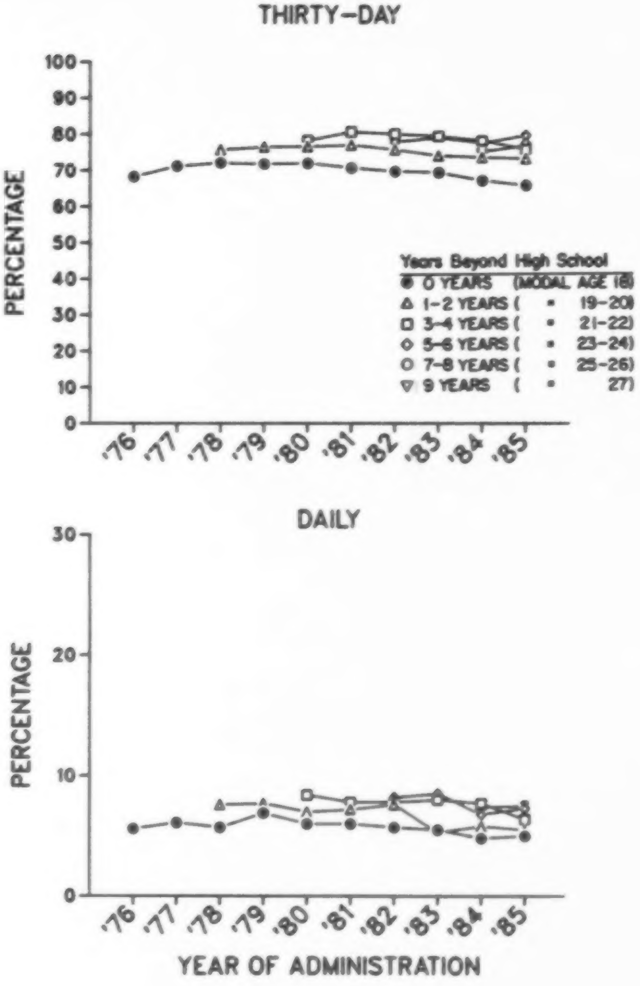
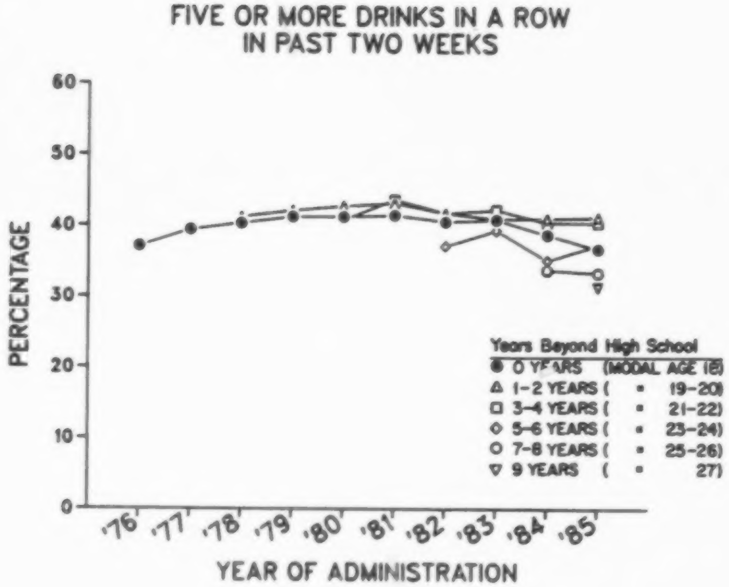


FIGURE 37c

Alcohol: Trends in Use Among Young Adults
by Age Group



FIVE OR MORE DRINKS IN A ROW
IN PAST TWO WEEKS

FIGURE 38a

Cigarettes: Trends in Use Among Young Adults
by Age Group

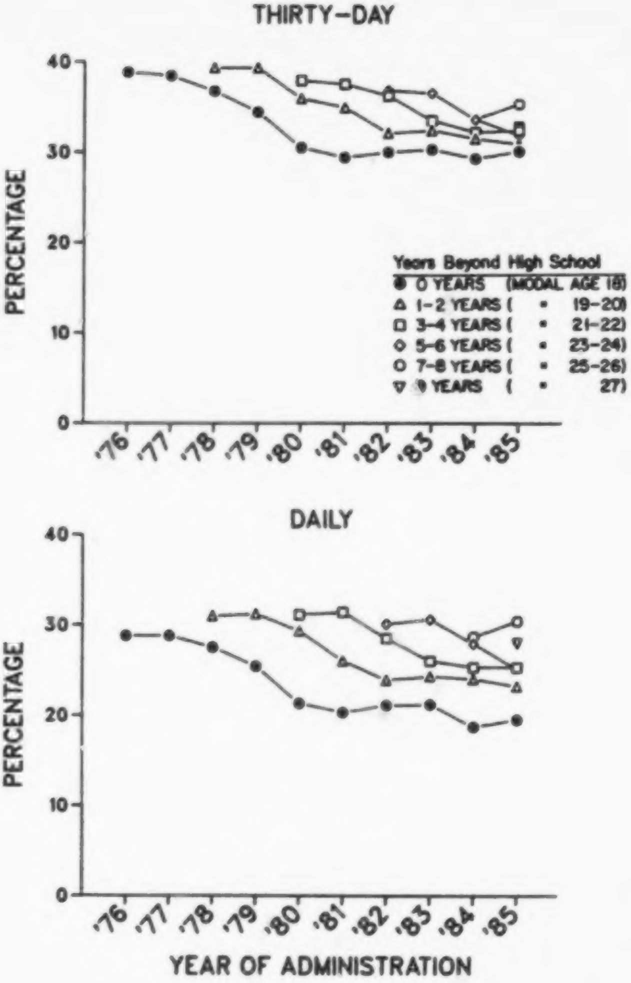
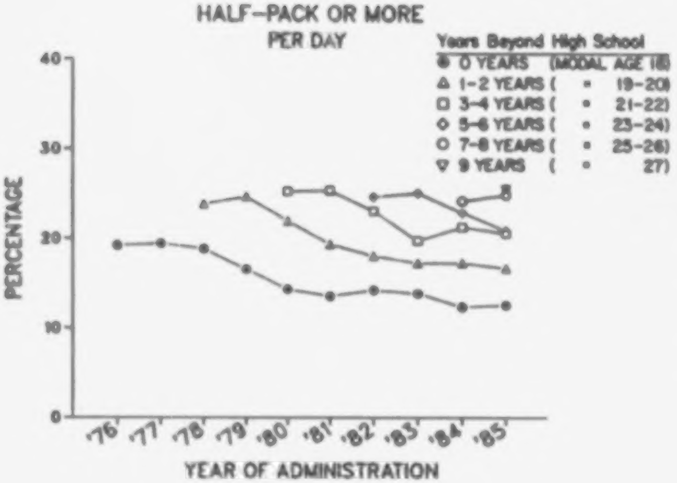


FIGURE 38b

Cigarettes: Trends in Use Among Young Adults
by Age Group



RECENT TRENDS IN DRUG USE AMONG YOUNG ADULTS

Trends in the use of the various licit and illicit drugs are presented in Figures 26 through 38 for all high school graduates from one up to eight years beyond high school. Each data point in these figures, which represents two adjacent class cohorts, is based on approximately 1200 weighted data cases. (Actual N's are somewhat larger.)

Trends in Prevalence Through 1985: Young Adults

- For most drugs, the trends in use among the older age groups have paralleled the changes among seniors discussed earlier in this monograph. This means that many of the changes observed have been secular trends—that is, they are observable across the various age groups. This has generally been true for trends in the lifetime, annual, and 30-day prevalence measures for the use of any illicit drug, marijuana, LSD, methaqualone, stimulants, barbiturates, tranquilizers, and opiates other than heroin.

- Several of these drug classes have actually exhibited a faster decline in use during recent years among the older age group than among the high school seniors. These include LSD, stimulants, and methaqualone.

- The alcohol statistics for the older age group also generally have tracked those reported for seniors (meaning a very gradual increase in the late 70's and then a fairly level period through 1983), with one important exception. The slight decline observed among seniors since 1983—particularly in 30-day prevalence and in occasions of heavy drinking during the prior two weeks—is not observable among those in their early to mid-twenties. Whether these differential trends may be due to the effects of changes in the drinking age laws in many states, which would tend to impact only specific age groups, remains to be determined.

- The prevalence statistics for cigarette smoking do not tend to show parallel trends across age groups. While the curves are of the same general shape for each age group, each curve tends to be displaced to the right of the one for the immediately preceding age group (which was two years younger). This pattern is very similar to the one described earlier for lifetime smoking rates for various grade levels below senior year. This is the classic pattern exhibited when there is a cohort effect present, meaning that a class cohort tends to be different from other cohorts in a consistent way across the age span. This is how we interpret the cigarette data (O'Malley et al., 1984, referenced earlier), and we believe that the cohort differences tend to remain throughout the lifespan due to the highly dependence-producing nature of nicotine. None of the other drugs studied here shows such a clear pattern of enduring cohort differences, despite wide variations in their use by different cohorts at a given age.

- Looking specifically at the trends from 1984 to 1985, a year in which the high school data suggest a halt in the decline of most types of drug use, we find that the data from these young adults tend to produce a similar finding. Tables 24 through 27 present the trends in prevalence for 1984-1985 for all respondents one-to-eight years beyond high school combined. They show that in 1985 there was no decline in the proportion of young adults reporting the use in the past year of any illicit drug, any illicit drug other than marijuana, or any illicit drug other than marijuana or stimulants. In fact, all of the statistics show a small (not statistically significant) increase (Table 27). The same was true for the annual prevalence of marijuana, specifically (Table 24).

- The data from young adults also showed no further significant decline in 1985 in the annual prevalence of tranquilizers or barbiturates, as was true among seniors. Annual prevalence for heroin also remained stable for both groups.

- Also parallel to the high school results are the findings that stimulants and methaqualone both did show further (significant) declines in 1985.

- Cocaine, which showed a statistically significant 1.5% increase in annual prevalence among seniors, also showed an increase of 0.9% in annual prevalence among young adults, though that did not reach statistical significance.

- Another class of drugs showing a small but statistically significant (0.7%) increase in annual prevalence among seniors in 1985—opiates other than heroin—showed a smaller (0.3%) not statistically significant increase among the young adult samples.

- Most statistics for alcohol use remained relatively unchanged in both groups in 1985. However, as is mentioned above, occasions of heavy drinking, which fell significantly among seniors, did not decline among the young adults. (It increased by 0.4%, which is not statistically significant.)

TABLE 24

Trends in Annual Prevalence of Twelve Types of Drugs
Among Follow-Up Respondents 1-8 Years Beyond High School

	Percent who used in past 12 months		
	1984	1985	'84–'85 change
Approx. Wtd. N =	(5500)	(5400)	
Marijuana	40.2	40.6	+0.4
LSD	3.8	3.1	−0.7s
Cocaine	19.0	19.9	+0.9
Heroin	0.2	0.2	0.0
Other Opiates[a]	3.3	3.6	+0.3
Stimulants, Adjusted[a]	15.5	13.5	−2.0ss
Sedatives[a]	4.9	3.8	−1.1ss
Barbiturates[a]	3.0	2.7	−0.3
Methaqualone[a]	3.3	1.8	−1.5sss
Tranquilizers[a]	5.8	5.5	−0.3
Alcohol	89.2	89.9	+0.7
Cigarettes	NA	NA	NA

NOTES: Level of significance of difference between the two most recent years:
s = .05, ss = .01, sss = .001.
NA indicates data not available.

[a] Only drug use which was not under a doctor's orders is included here.

TABLE 25

Trends in Thirty-Day Prevalence of Twelve Types of Drugs
Among Follow-Up Respondents 1-8 Years Beyond High School

	Percent who used in past 30 days		
	1984	1985	'84–'85 change
Approx. Wtd. N =	(5500)	(5400)	
Marijuana	25.3	24.9	−0.4
LSD	0.8	0.7	−0.1
Cocaine	8.7	8.7	0.0
Heroin	0.1	0.1	0.0
Other Opiates[a]	1.1	1.0	−0.1
Stimulants, Adjusted[a]	6.3	5.1	−1.2ss
Sedatives[a]	1.3	1.0	−0.3
Barbiturates[a]	1.0	0.8	−0.2
Methaqualone[a]	0.6	0.3	−0.3s
Tranquilizers[a]	1.9	1.8	−0.1
Alcohol	76.1	76.4	+0.3
Cigarettes	32.7	32.6	−0.1

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001.

[a] Only drug use which was not under a doctor's orders is included here.

TABLE 26

Trends in Thirty-Day Prevalence of Daily Use of Twelve Types of Drugs
Among Follow-Up Respondents 1-8 Years Beyond High School

	Percent using daily in last 30 days		
	1984	1985	'84–'85 change
Approx. Wtd. N =	(5500)	(5400)	
Marijuana	5.4	5.2	−0.2
LSD	0.0	0.0	0.0
Cocaine	0.2	0.2	0.0
Heroin	0.0	0.0	0.0
Other Opiates[a]	0.1	0.0	0.0
Stimulants, Adjusted[a]	0.4	0.2	−0.2s
Sedatives[a]	0.1	0.0	−0.1
Barbiturates[a]	0.1	0.0	−0.1
Methaqualone[a]	0.0	0.0	0.0
Tranquilizers[a]	0.0	0.0	0.0
Alcohol	6.9	6.7	−0.2
Five or more drinks in a row in last two weeks	37.7	38.1	+0.4
Cigarettes	26.4	25.9	−0.5
Half pack or more per day in past 30 days	21.2	20.6	−0.6

NOTES: Level of significance of difference between the two most recent years: s = .05, ss = .01, sss = .001.

[a] Only drug use which was not under a doctor's orders is included here.

TABLE 27

Trends in Annual and Thirty-Day Prevalence of An Illicit Drug Use Index
Among Follow-Up Respondents 1–8 Years Beyond High School
by Sex

	1984	1985	'84–'85 change
	Percent reporting use in last twelve months		
Any Illicit Drug	45.3	46.2	+0.9
Males	48.6	49.8	+1.2
Females	42.5	43.4	+0.9
Any Illicit Drug Other than Marijuana	29.5	29.9	+0.4
Males	32.9	33.1	+0.2
Females	26.6	27.3	+0.7
Any Illicit Drug Other than Marijuana or Stimulants	24.4	25.2	+0.8
Males	28.5	28.7	+0.2
Females	20.7	22.4	+1.7
	Percent reporting use in last 30 days		
Any Illicit Drug	29.3	28.6	−0.7
Males	33.2	32.7	−0.5
Females	25.9	25.4	−0.5
Any Illicit Drug Other than Marijuana	15.2	14.9	−0.3
Males	17.7	17.1	−0.6
Females	13.0	13.1	+0.1
Any Illicit Drug Other than Marijuana or Stimulants	11.8	11.8	0.0
Males	14.2	14.0	−0.2
Females	9.5	10.0	+0.5
	Approximate Weighted N's		
All Respondents =	(5500)	(5400)	
Males	(2500)	(2400)	
Females	(2900)	(3000)	

NOTES: Level of significance of difference between the two most recent years: s =.05, ss =.01, sss =.001.

- The only other slight divergence in 1985 between high school seniors and the older age group (modal ages from 19 to 26) occurred for cigarette smoking. While seniors showed a slight (nonsignificant) increase in smoking in 1985, the older age group showed a slight (nonsignificant) decrease. However, because of the strength of known cohort effects in cigarette smoking, we do not necessarily expect parallel changes in the two age groups in any given year.

- In sum, these various samples of high school seniors and young adults show longer-term trends in substance use, as well as near-term trends, which tend to be highly parallel. While divergent trends would not necessarily demonstrate a lack of validity in either set of data (because such a divergence would not be unreasonable to expect in reality), we believe that the high degree of convergence provides an important new source of validation of the trends which have been reported among the seniors. In fact, each of these sets of data helps to validate the "trend story" reported by the other.

Sex Differences in Trends

- Table 23 shows the prevalence rates in 1985 for 19 to 26-year-old males and females, separately. In general, the recent trends in use have been very similar for the two sexes (data not shown). There are two notable exceptions.

- Use of amphetamines has declined recently more among males than among females, so that what was about a 4% difference in annual use in 1982 is, as of 1985, only a 2% difference.

- Similarly, methaqualone use has declined much more among males (who started from a distinctly higher level), and both sexes now show similar (very low) rates of use. As mentioned earlier, this may be due in part to the fact that this substance is no longer manufactured or distributed legally in the United States.

COLLEGE STUDENTS

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PREVALENCE OF DRUG USE AMONG COLLEGE STUDENTS

The follow-up design of the Monitoring the Future project is capable of generating an excellent national sample of college students—better in many ways than a design which first samples colleges and then samples students within them, because in the present sample the students are not clustered in a limited number of colleges. Given the much greater diversity in post secondary institutions than in high schools, the use of a clustered sample would place far greater limitations on sample accuracy at the college level than at the high school level. Further, the absence of dropouts in the high school senior sample should have practically no effect on the college sample, since very few of the dropouts would go on to college.

Perhaps the major limitation of the present design is that it must delimit the college sample to a certain age level. For trend estimation purposes, we have decided to limit the age band to the most typical one for college attendance, i.e., one to four years past high school, which corresponds to the modal ages of 19 to 22 years old. According to statistics from the United States Bureau of the Census,* this age should encompass about 85% of all students enrolled in college full-time in 1980. While extending the age band to be covered by an additional two years would cover 92% of all enrolled college students, it would also reduce by two years the interval over which we could report trend data. The differences which would result in the 1985 prevalence estimates under the two definitions are extremely small, however. The annual prevalence of all drugs except cocaine would shift only about one-or two-tenths of a percent. Cocaine, which has the greatest amount of change with age, would have an annual prevalence rate only 0.8% higher if the six year age span were covered rather than the four year age span. Thus, for purposes of estimating all prevalence rates except lifetime prevalence, the four year and six year intervals are nearly interchangeable.

On the positive side, controlling the age band (either one to four or one to six years after high school) may be desirable for trend estimation purposes, in the event that the age composition of college students should change much with time. Otherwise college students characterized in one year would represent a non-comparable segment of the population when compared to college students surveyed in another year.

College students are here defined as those follow-up respondents one to four years past high school who say they were registered as full-time students at the beginning of March in the year in question and who say they are enrolled in a two or four year college. Thus, the definition encompasses only those who are one to four years past high school and are active full-time undergraduate college students in the year in question. It excludes those who may previously have been college students or may have already completed college.

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*U.S. Bureau of the Census. Current Population Reports: Population Characteristics, Series P-20, No. 400. Washington, DC: U.S. Government Printing Office, 1982.

Prevalence rates for college students are provided in Tables 28 to 31. They are also included in the figures providing trends in annual prevalence (see Figures 39 through 51) along with the prevalence rates for all respondents one to four years past high school, including the college students. Having both statistics makes it possible to see whether college students are above or below average for all high school graduates in their age group taken as a whole.

Any observed difference between college students and the total group is an underestimate of the total difference between the college enrolled and those not enrolled, of course, since the college enrolled are themselves included in the total. (They comprise roughly 40% of the total in a given year.) Further, any such difference would likely be enlarged if data from the missing high school dropout segment were available. Therefore, any differences observed here are only an indication of the direction and relative size of differences between the college and non-college-enrolled populations, not an absolute estimate of them.

The findings are presented below.

Prevalence of Drug Use in 1985: College Students

- There is practically no difference between those enrolled in college versus all respondents of the same age (i.e., 1 to 4 years past high school) in their annual prevalence of any illicit drug use, use of any illicit drug other than marijuana, or use of any illicit drug other than marijuana or stimulants (Figures 39-41).

- College students are also average for their age group in their annual prevalence of marijuana use. However, their rate of current daily marijuana use is only 3.1% versus 4.6% for their age group taken as a whole. Recall that a similar large difference in daily use was observable in high school between the college-bound and those not bound for college.

- College students also have about average rates for their age group of cocaine use and methaqualone use in 1985, though in the past they have tended to have below-average rates of use on both drugs when compared to their age group.

- College students are below average, in their annual usage rates for LSD, stimulants, barbiturates, tranquilizers, and in 1985 (for the first time) in opiates other than heroin. For the most part, however, their rates of use are not much below average. LSD shows the largest proportional difference, with an annual prevalence of 2.2% vs. 3.3% for all respondents one to four years past high school. The comparable figures for stimulants are 12% vs. 14%, for barbiturates 1.3% vs. 2.2%, for tranquilizers 3.5% vs. 4.5%, and for opiates other than heroin 2.4% vs. 3.6%.

- Regarding alcohol use, today's college students have above average annual prevalence compared to all high school graduates in their age cohort (92% vs. 89%), a slightly above average monthly prevalence (80% vs. 75%), and a slightly below average daily prevalence (5.0% vs. 6.0%). The most important difference, however, lies in the prevalence of occasions of heavy drinking (five or more drinks in a row in the past two weeks) which is 45% among college students, versus 41% for the total group of respondents including the college students.

- By far the largest difference between college students and others their age occurs for cigarette smoking. For example, their prevalence of daily smoking is only 14% vs. 24% for all high school graduates that age, including the college students. Smoking at the rate of half-a-pack-a-day stands at 9.4% vs. 18.5%, respectively. Recall that the high school senior data show the college-bound to have much lower smoking rates in high school than the noncollege-bound: thus most or all of the differences observed at college age actually preceded college attendance.

Sex Differences in Prevalence Among College Students

While tabular data are not provided for male and female college students separately (except for Table 31, giving differences on the illicit drug use indexes), sex differences are plotted in Figure 39 through 51 for the various drugs.

- It may be seen that most of the sex differences among college students replicate those discussed earlier for all young adults (one to eight years past high school), which in turn replicated sex differences in high school for the most part. That means that among college students, males have higher annual prevalence rates for most drugs, including marijuana (47% vs. 37%), LSD (2.8% vs. 1.8%), cocaine (20% vs. 15%), stimulants (13% vs. 11%), and opiates other than heroin (3.5% vs. 1.4%).

- Males also have higher prevalence rates on several other drugs, but both sexes are so close to zero that the absolute differences are now negligible. These include methaqualone (1.5% vs. 1.2%), barbiturates (1.6% vs. 1.1%) and heroin (0.2% vs. 0.1%).

- As is true for the entire young adult sample, substantial sex differences are to be found in daily marijuana use (4.9% for males vs. 1.6% for females), daily alcohol use (7.4% vs. 3.1%), and occasions of drinking five or more drinks in a row in the prior two weeks (57% vs. 34%). The three to one male-female ratio in daily marijuana use is noteworthy and is greater than is observed in the sample of all young adults. In essence, it means that the great majority of daily marijuana use in college is to be found among the males.

- Other than the finding on daily marijuana use, the only other drug-using behavior which shows a sex difference appreciably different than those observed in the sample of all young adults involves cigarette smoking. While the male and female rates were very close among all young adults, among college students there is an appreciable sex difference in smoking rates. The half-a-pack-per day rate is considerably higher for college women than men (11% vs. 7%, respectively) as is the daily figure (18% vs. 10%) and the monthly prevalence figure (26% vs. 19%). For whatever reason, college women are quite a bit more likely to be smokers than their male counterparts.

TABLE 28

Trends in Annual Prevalence of Twelve Types of Drugs
Among College Students 1–4 Years Beyond High School

	Percent who used in past 12 months						
	1980	1981	1982	1983	1984	1985	'84–'85 change
Approx. Wtd. N =	(1040)	(1130)	(1150)	(1170)	(1110)	(1080)	
Marijuana	51.2	51.3	44.7	45.2	40.7	41.7	+1.0
LSD	6.1	4.6	6.3	4.2	3.7	2.2	−1.5s
Cocaine	16.9	15.9	17.2	17.2	16.4	17.3	+0.9
Heroin	0.4	0.2	0.1	0.0	0.1	0.2	+0.1
Other Opiates[a]	5.1	4.4	3.8	3.8	3.8	2.4	−1.4
Stimulants[a]	22.4	22.2	NA	NA	NA	NA	NA
Stimulants, Adjusted[a,b]	NA	NA	21.1	17.3	15.8	11.9	−3.9ss
Sedatives[a]	8.3	7.9	8.0	4.5	3.4	2.5	−0.9
Barbiturates[a]	2.9	2.8	3.2	2.2	1.9	1.3	−0.6
Methaqualone[a]	7.2	6.5	6.6	3.1	2.5	1.4	−1.1
Tranquilizers[a]	6.9	4.8	4.7	4.6	3.5	3.5	0.0
Alcohol	90.5	92.5	92.2	91.6	90.0	92.0	+2.0
Cigarettes	NA	NA	NA	NA	NA	NA	NA

NOTES: Level of significance of difference between the two most recent years:
s = .05, ss = .01, sss = .001.
NA indicates data not available.

[a] Only drug use which was not under a doctor's orders is included here.

[b] Adjusted for the inappropriate reporting of non-prescription stimulants.

TABLE 29

Trends in Thirty-Day Prevalence of Twelve Types of Drugs
Among College Students 1–4 Years Beyond High School

	Percent who used in last 30 days						
	1980	1981	1982	1983	1984	1985	'84–'85 change
Approx. Wtd. N =	(1040)	(1130)	(1150)	(1170)	(1110)	(1080)	
Marijuana	34.0	33.2	26.8	26.2	23.0	23.6	+0.6
LSD	1.3	1.4	1.7	0.9	0.8	0.7	−0.1
Cocaine	6.9	7.3	7.9	6.4	7.6	6.9	−0.7
Heroin	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Other Opiates[a]	1.8	1.1	1.0	1.1	1.4	0.7	−0.7
Stimulants[a]	13.4	12.3	NA	NA	NA	NA	NA
Stimulants, Adjusted[a,b]	NA	NA	9.9	7.0	5.5	4.2	−1.3
Sedatives[a]	3.7	3.4	2.5	1.1	1.0	0.7	−0.3
Barbiturates[a]	0.9	0.8	0.9	0.5	0.7	0.4	−0.3
Methaqualone[a]	3.1	3.0	1.9	0.7	0.5	0.2	−0.3
Tranquilizers[a]	2.0	1.4	1.4	1.1	1.2	1.4	+0.2
Alcohol	81.8	81.9	82.8	80.3	79.1	80.3	+1.2
Cigarettes	25.8	25.9	24.4	24.7	21.5	22.4	+0.9

NOTES: Level of significance of difference between the two most recent years:
s =.05, ss =.01, sss =.001.
NA indicates data not available.

[a] Only drug use which was not under a doctor's orders is included here.

[b] Adjusted for the inappropriate reporting of non-prescription stimulants.

TABLE 30

Trends in Thirty-Day Prevalence of Daily Use of Twelve Types of Drugs
Among College Students 1-4 Years Beyond High School

	Percent who used daily in last 30 days						
	1980	1981	1982	1983	1984	1985	'84–'85 change
Approx. Wtd. N =	(1040)	(1130)	(1150)	(1170)	(1110)	(1080)	
Marijuana	7.2	5.6	4.2	3.8	3.6	3.1	−0.5
LSD	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cocaine	0.2	0.0	0.3	0.1	0.4	0.1	−0.3
Heroin	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Opiates[a]	0.0	0.1	0.0	0.1	0.1	0.0	−0.1
Stimulants[a]	0.5	0.4	NA	NA	NA	NA	NA
Stimulants, Adjusted[a,b]	NA	NA	0.3	0.2	0.2	0.0	−0.2
Sedatives[a]	0.0	0.0	0.1	0.0	0.1	0.0	−0.1
Barbiturates[a]	0.0	0.0	0.1	0.0	0.1	0.0	−0.1
Methaqualone[a]	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tranquilizers[a]	0.0	0.0	0.1	0.0	0.1	0.0	−0.1
Alcohol	6.5	5.4	6.1	6.1	6.6	5.0	−1.6
Five or more drinks in a row in last two weeks	43.9	43.6	44.0	43.1	45.5	44.6	−0.9
Cigarettes	18.3	17.1	16.2	15.3	14.8	14.3	−0.5
Half pack or more per day in past 30 days	12.7	11.9	10.5	9.6	10.2	9.4	−0.8

NOTES: Level of significance of difference between the two most recent years:
s =.05, ss =.01, sss =.001.
NA indicated data not available.

[a] Only drug use which was not under a doctor's orders is included here.

[b] Adjusted for the inappropriate reporting of non-prescription stimulants.

TABLE 31

Trends in Annual and 30-Day Prevalence of An Illicit Drug Use Index
Among College Students 1-4 Years Beyond High School
by Sex

	1980[a]	1981[a]	1982	1983	1984	1985	'84–'85 change
			Percent reporting use in last twelve months				
Any Illicit Drug	*56.2*	*55.0*	49.5	49.9	45.1	46.3	+1.2
Males	*58.9*	*56.2*	54.6	53.4	48.4	50.9	+2.5
Females	*53.3*	*54.0*	44.9	46.7	41.9	42.7	+0.8
Any Illicit Drug Other than Marijuana	*32.3*	*31.8*	30.0	29.9	27.2	26.7	−0.5
Males	*33.7*	*32.8*	33.4	33.5	29.2	29.7	+0.5
Females	*31.1*	*30.9*	26.9	26.7	25.2	24.4	−0.8
Any Illicit Drug Other than Marijuana or Stimulants	25.2	22.6	22.3	23.6	21.1	21.4	+0.3
Males	28.4	25.7	25.7	26.6	25.3	24.4	−0.9
Females	22.1	19.8	19.3	21.1	17.0	19.0	+2.0
			Percent reporting use in last 30 days				
Any Illicit Drug	*38.4*	*37.6*	31.3	29.4	27.0	26.1	−0.9
Males	*42.9*	*40.6*	37.7	33.8	30.4	29.9	−0.5
Females	*34.0*	*34.8*	25.6	25.5	23.7	23.2	−0.5
Any Illicit Drug Other than Marijuana	*20.7*	*18.6*	17.1	13.9	13.8	11.8	−2.0
Males	*22.9*	*18.6*	20.2	16.0	16.1	12.7	−3.4
Females	*18.6*	*18.5*	14.2	12.2	11.6	11.2	−0.4
Any Illicit Drug Other than Marijuana or Stimulants	12.6	11.5	11.2	9.8	10.7	9.1	−1.6
Males	15.2	13.3	13.1	12.1	13.5	10.6	−2.9
Females	10.1	9.9	9.5	7.8	8.0	8.0	0.0
			Approximate Weighted N's				
All Respondents =	(1040)	(1130)	(1150)	(1170)	(1110)	(1080)	
Males	(520)	(530)	(550)	(550)	(540)	(490)	
Females	(520)	(600)	(610)	(620)	(570)	(600)	

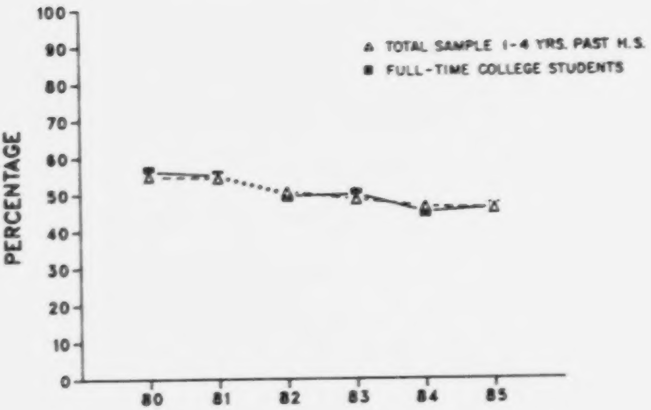
NOTES: Level of significance of difference between the two most recent years:
s = .05, ss = .01, sss = .001.

[a] Revised questions about stimulant use were introduced in 1982 to exclude more completely the inappropriate reporting of non-prescription stimulants. The data in italics are therefore not strictly comparable to the other data.

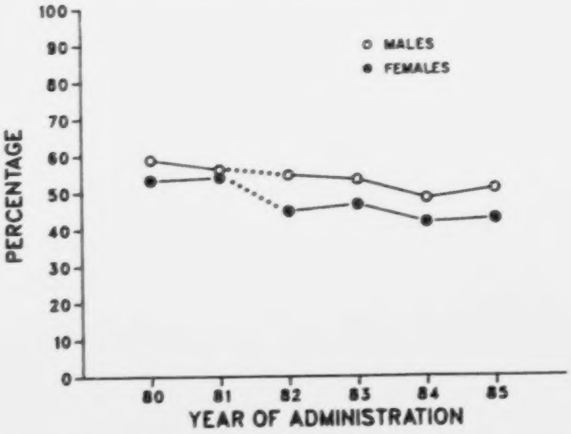
FIGURE 39

Any Illicit Drug: Trends in Annual Prevalence Among College Students
1-4 Years Beyond High School

COLLEGE STUDENTS VS TOTAL



MALE VS FEMALE COLLEGE STUDENTS

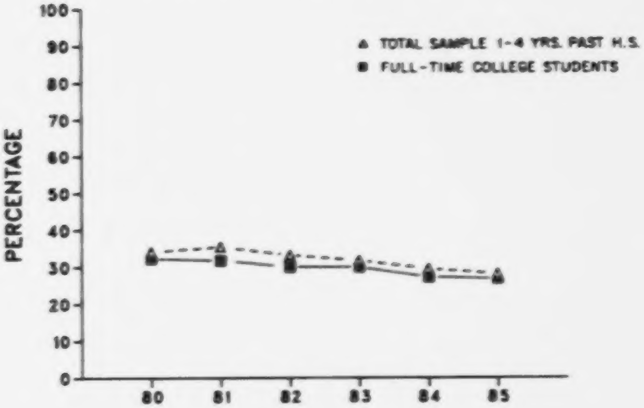


NOTE. The dotted lines between 1981 and 1982 denote the change in the amphetamine question.

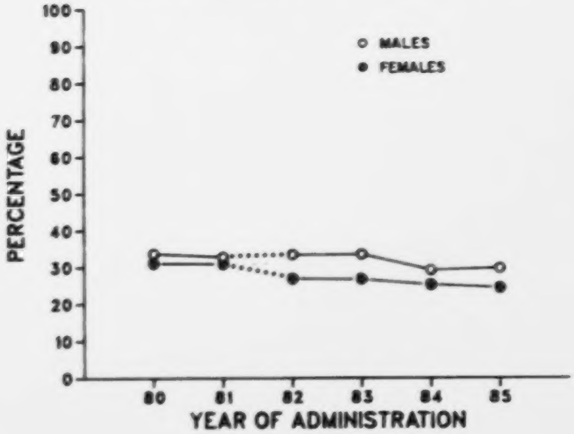
FIGURE 40

Any Illicit Drug Other than Marijuana: Trends in Annual Prevalence Among College Students
1-4 Years Beyond High School

COLLEGE STUDENTS VS TOTAL



MALE VS FEMALE COLLEGE STUDENTS

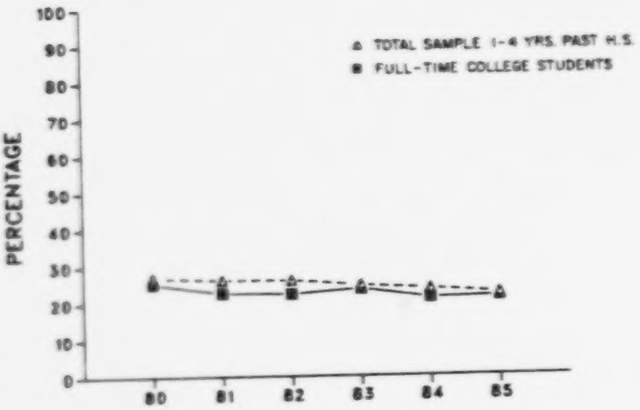


NOTE. The dotted lines between 1981 and 1982 denote the change in the amphetamine question.

FIGURE 41

Any Illicit Drug Other than Marijuana or Stimulants: Trends in Annual Prevalence Among College Students
1–4 Years Beyond High School

COLLEGE STUDENTS VS TOTAL



MALE VS FEMALE COLLEGE STUDENTS

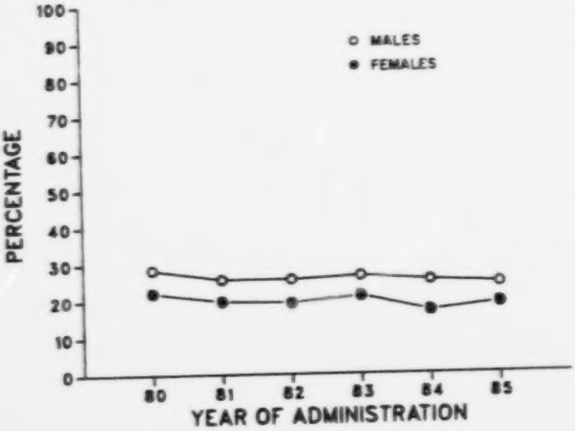


FIGURE 42a

Marijuana: Trends in Annual Prevalence Among College Students
1–4 Years Beyond High School

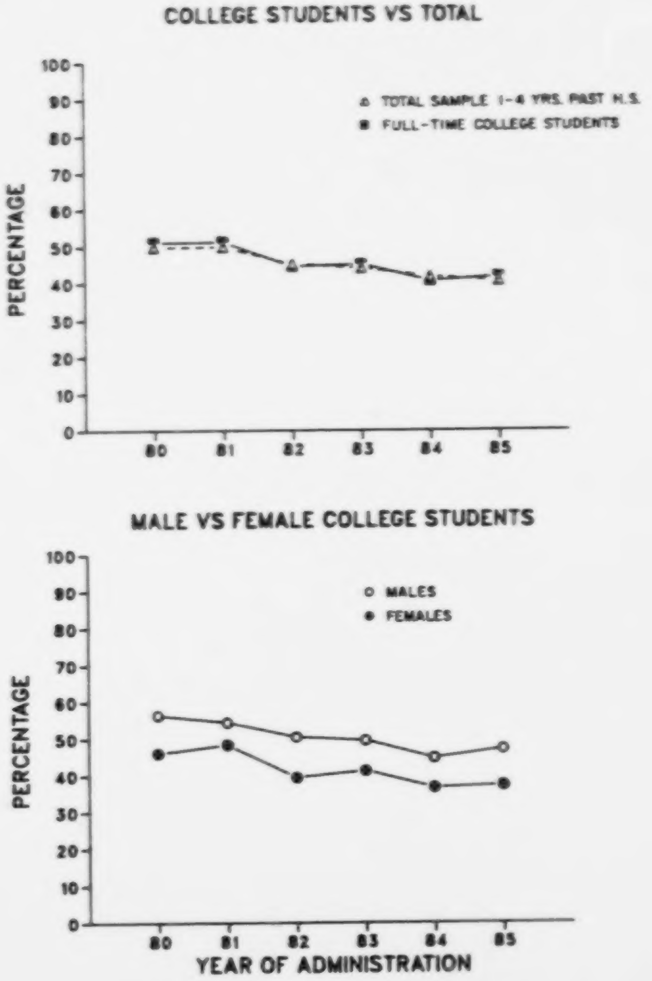


FIGURE 42b

Marijuana: Trends in Thirty-Day Prevalence of Daily Use Among College Students
1–4 Years Beyond High School

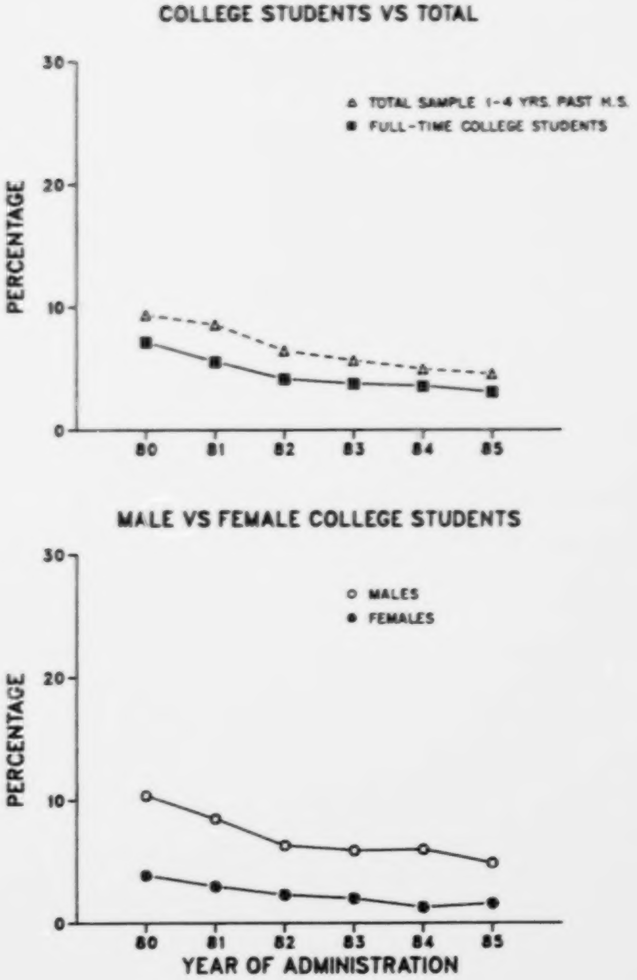
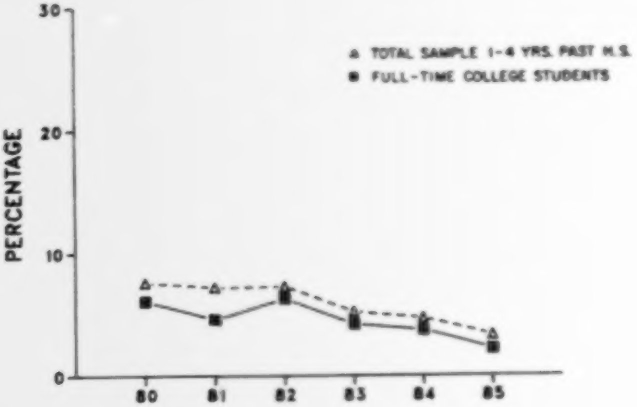


FIGURE 43

LSD: Trends in Annual Prevalence Among College Students
1-4 Years Beyond High School

COLLEGE STUDENTS VS TOTAL



MALE VS FEMALE COLLEGE STUDENTS

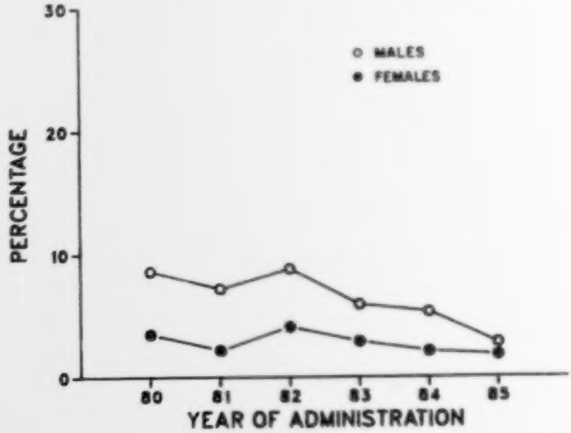


FIGURE 44

Cocaine: Trends in Annual Prevalence Among College Students
1-4 Years Beyond High School

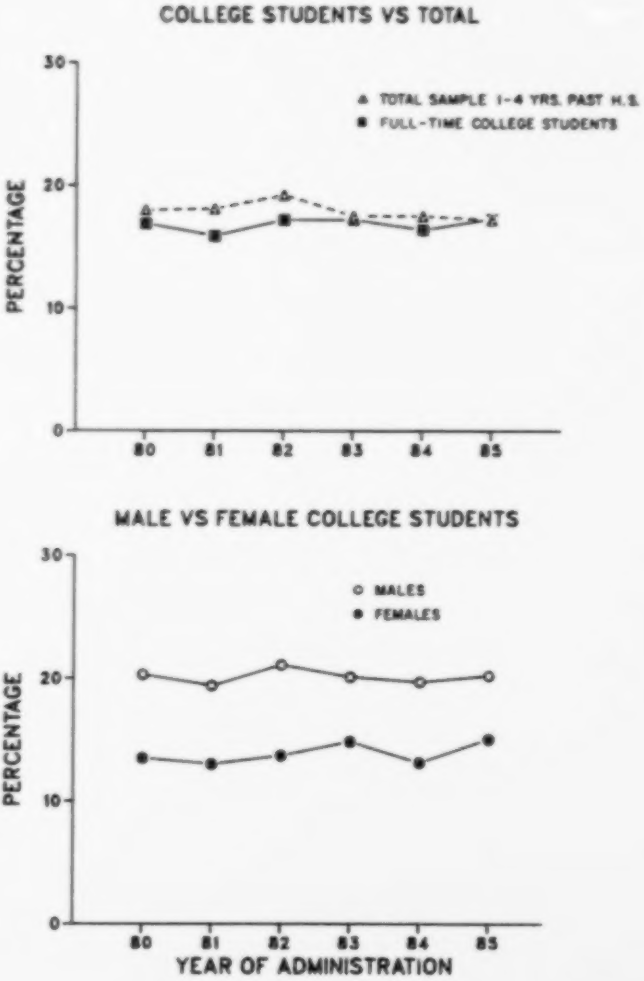
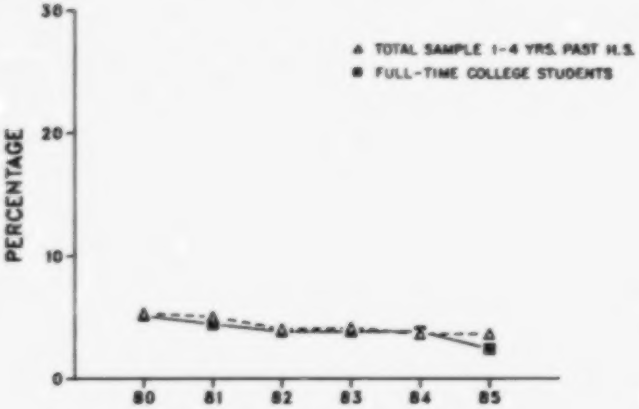


FIGURE 45

Other Opiates: Trends in Annual Prevalence Among College Students
1-4 Years Beyond High School

COLLEGE STUDENTS VS TOTAL



MALE VS FEMALE COLLEGE STUDENTS

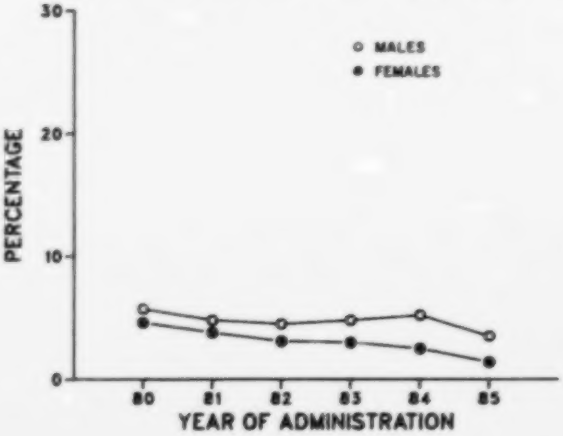
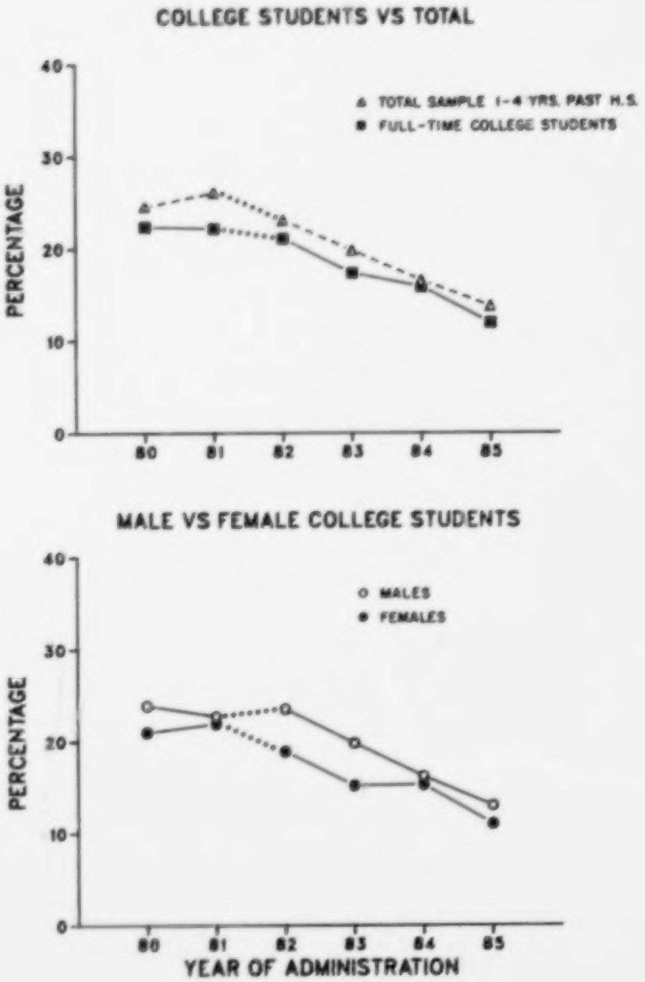


FIGURE 46

Stimulants: Trends in Annual Prevalence Among College Students
1-4 Years Beyond High School



NOTE. The dotted lines between 1981 and 1982 denote the change in the amphetamine question.

FIGURE 47

Barbiturates: Trends in Annual Prevalence Among College Students
1-4 Years Beyond High School

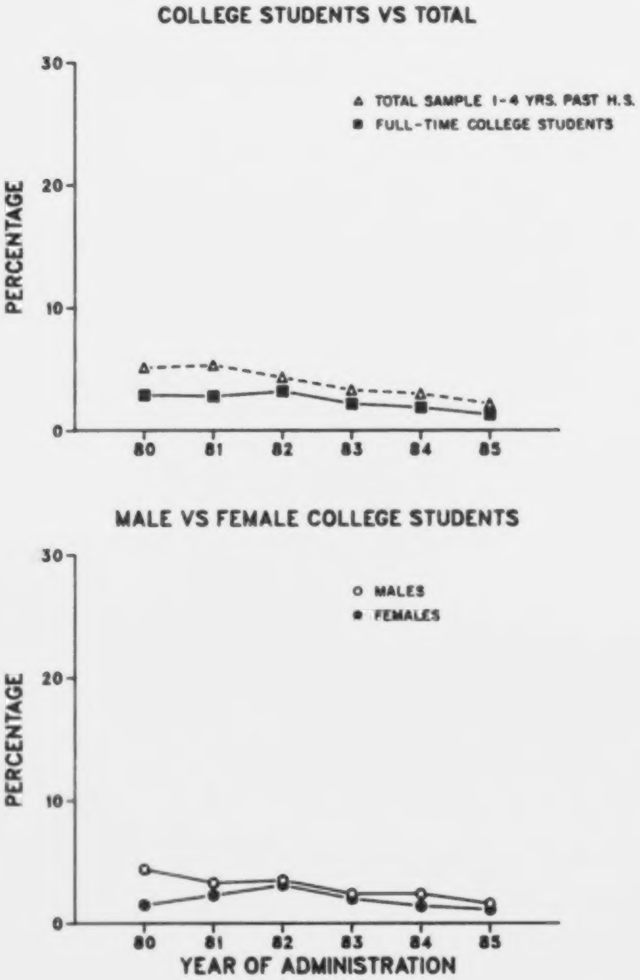


FIGURE 48

Methaqualone: Trends in Annual Prevalence Among College Students
1-4 Years Beyond High School

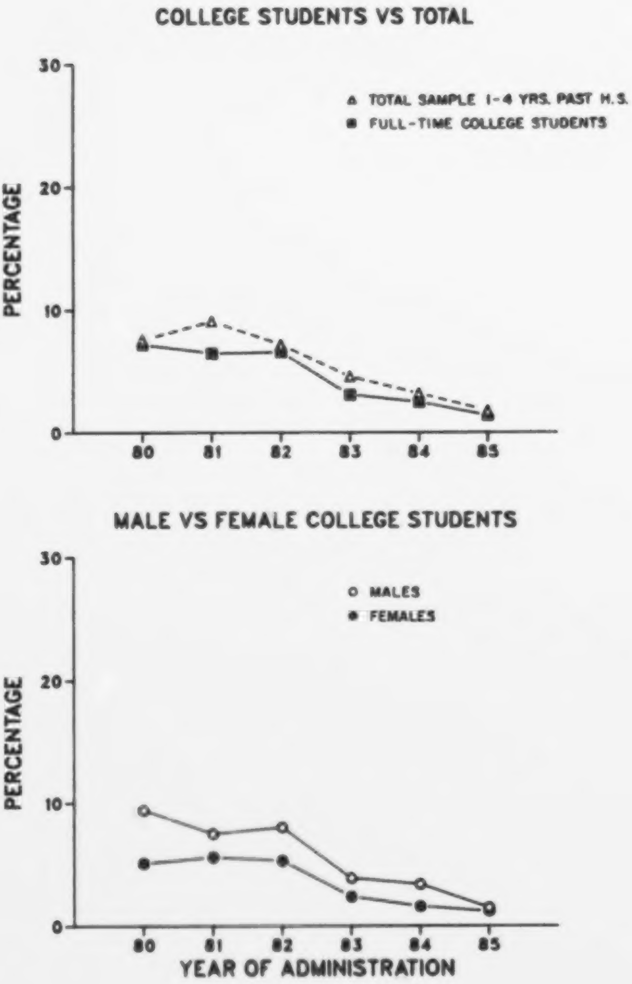


FIGURE 49

Tranquilizers: Trends in Annual Prevalence Among College Students
1-4 Years Beyond High School

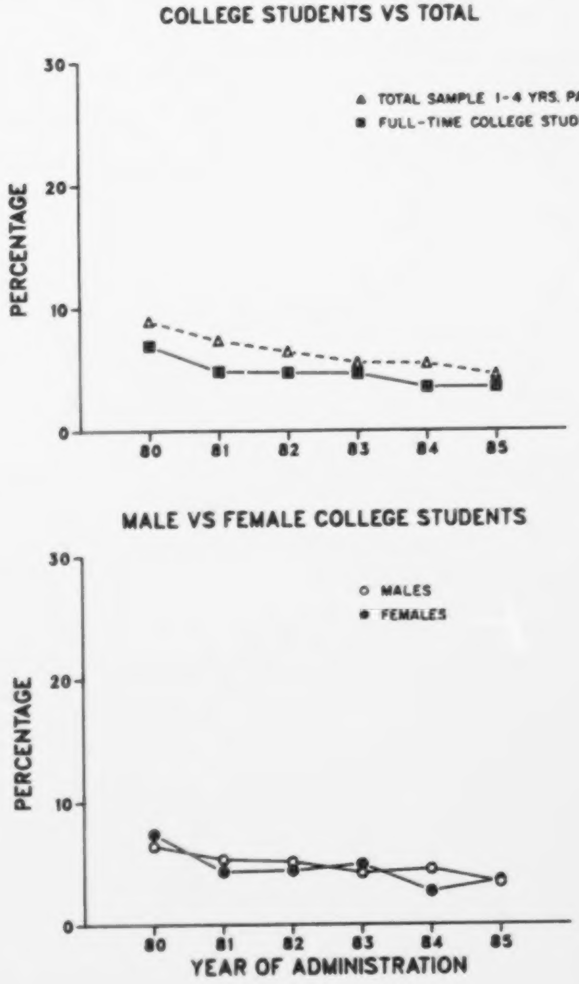


FIGURE 50a

Alcohol: Trends in Annual Prevalence Among College Students
1-4 Years Beyond High School

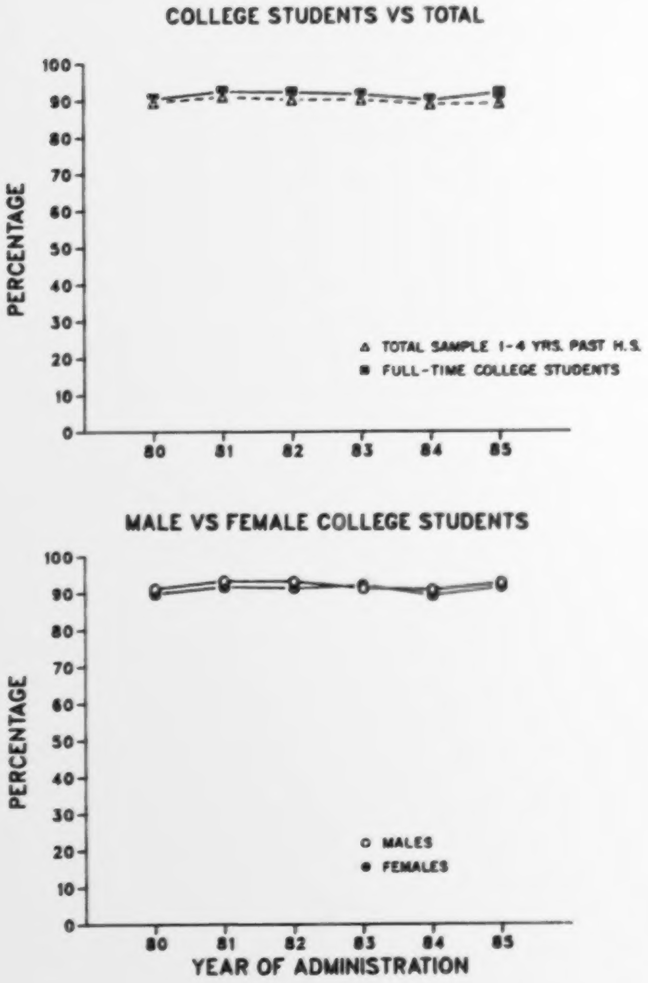


FIGURE 50b

Alcohol: Trends in Thirty-Day Prevalence of Daily Use Among College Students
1–4 Years Beyond High School

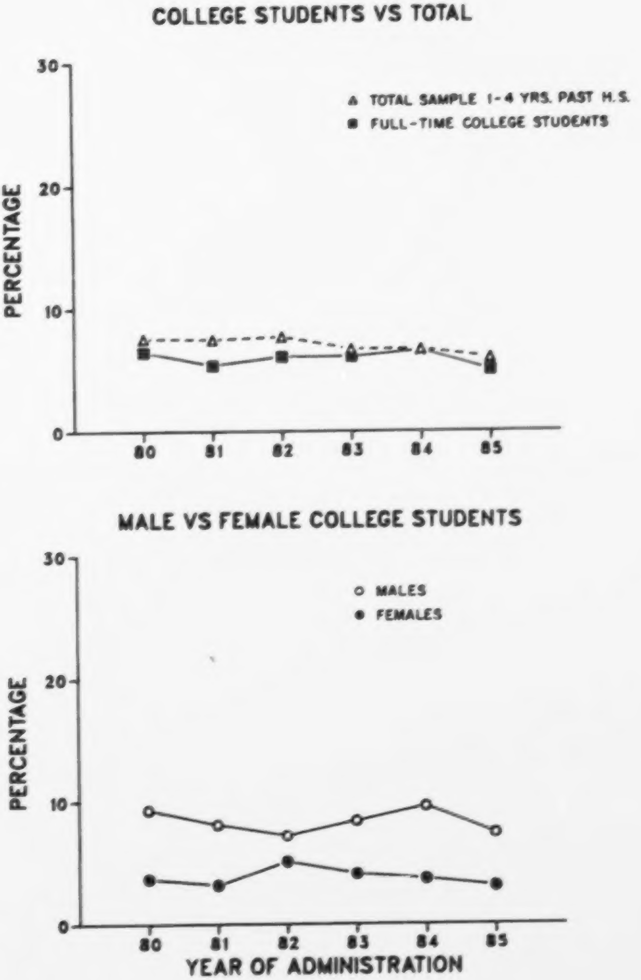
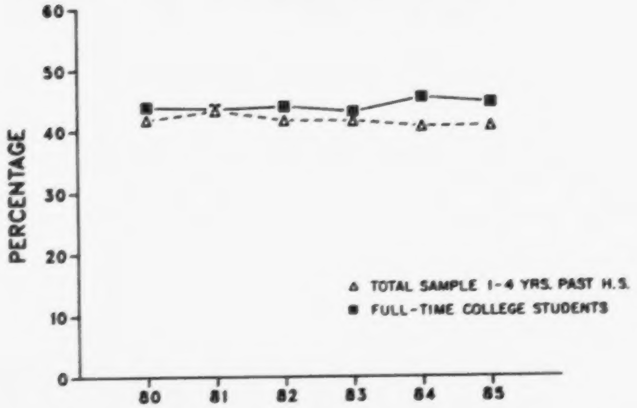


FIGURE 50c

Alcohol: Trends in Two Week Prevalence of 5 or More Drinks in a Row Among College Students
1-4 Years Beyond High School

COLLEGE STUDENTS VS TOTAL



MALE VS FEMALE COLLEGE STUDENTS

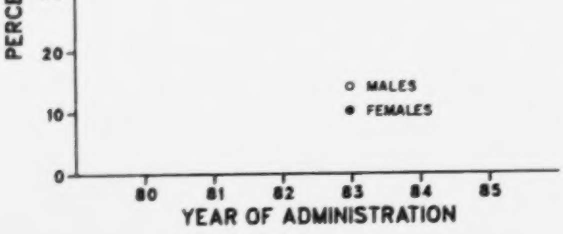


FIGURE 51a

Cigarettes: Trends in Thirty-Day Prevalence Among College Students
1-4 Years Beyond High School

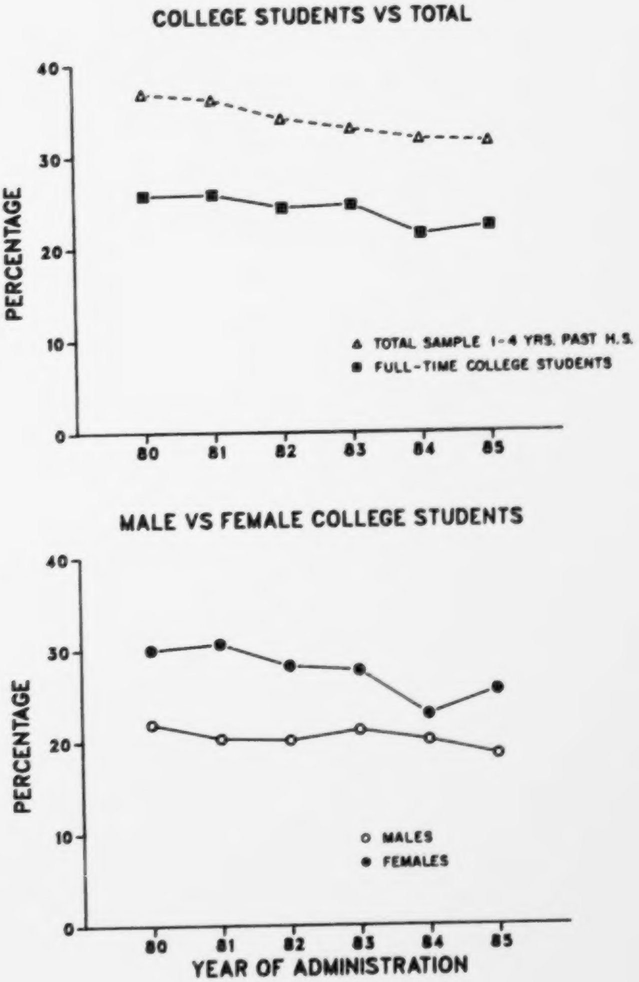
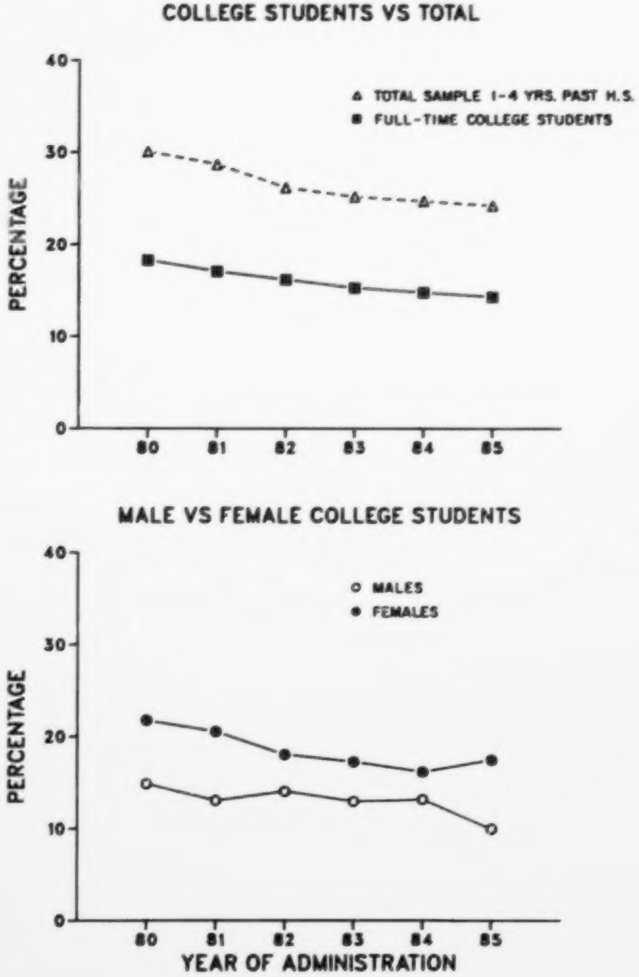


FIGURE 51b

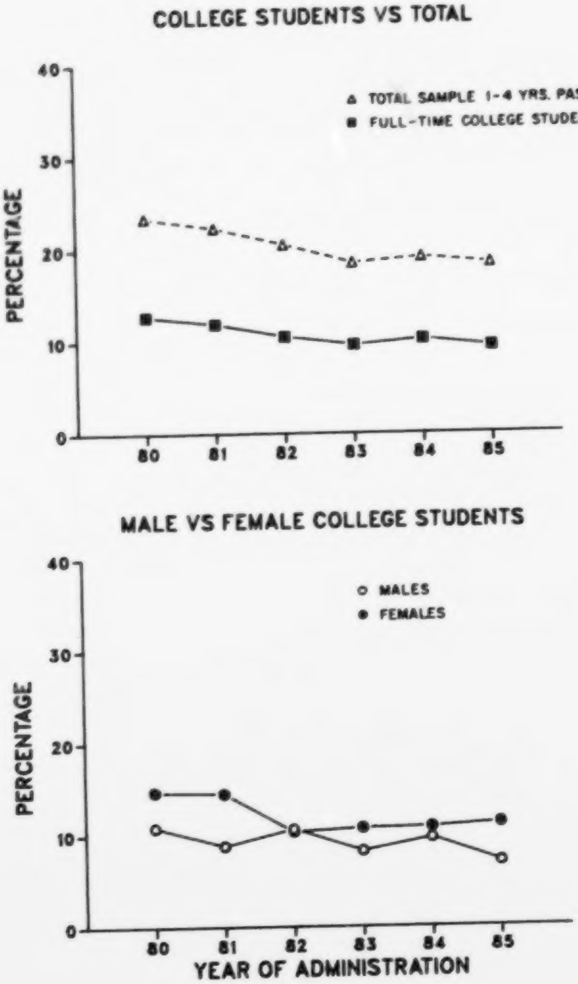
Cigarettes: Trends in Thirty-Day Prevalence of Daily Use Among College Students
1-4 Years Beyond High School


COLLEGE STUDENTS VS TOTAL

MALE VS FEMALE COLLEGE STUDENTS

FIGURE 51c

Cigarettes: Trends in Thirty-Day Use of Half-Pack a Day or More Among College Students
1-4 Years Beyond High School



RECENT TRENDS IN DRUG USE AMONG COLLEGE STUDENTS

Since the drug-using behaviors of American college students in the late 1960's and early 1970's represented the leading edge of what was to become an epidemic of certain types of drug use in the general population—especially with regard to the use of marijuana and LSD—it is interesting and important to note what has happened to those behaviors among college students in recent years.

In this section we continue to use the definition of college students as high school graduates one to four years past high school who are enrolled full time in a two year or four year college at the beginning of March in the year in question. For comparison purposes we also provide trend data on the entire respondent group one to four years past high school, including the college students. (See Figures 39 through 51.) Because the rate of college enrollment declines steadily with number of years beyond high school, the comparison group is slightly older on the average than the college-enrolled component of that group. However, this should influence the comparisons of the college-enrolled with the total group rather little, since few of the drugs show an age effect in their usage rates.

It should also be remembered that the difference between the enrolled and total group shows the degree to which college students are above or below average among all high school graduates in this age band. Were we able to include the high school dropout segment in the "total" calculation, any differences with the college-enrolled would probably be accentuated.

For each year there are approximately 1100 respondents comprising the college student sample (see Table 31 for N's per year) and roughly 2800 respondents comprising the total age group one to four years past high school. Comparisons of the trends in these two groups are given below.

Trends in Prevalence 1980-1985: College Students

- Trends between 1980 and 1985 in the use of any illicit drug other than marijuana or amphetamines are very parallel for those enrolled in college and for all respondents of the same age (i.e., 1 to 4 years past high school), with both groups showing slight declines. The same is true for use of any illicit drug and use of any illicit drug other than marijuana, but part of the 1980 to 1982 decline in these two measures is due to the artifactual over-reporting of amphetamine use in 1980 and 1981, which was subsequently removed by a change in question wording in 1982. Since 1982 there have been parallel slight declines for both the college-enrolled and those not enrolled, on all three measures of illicit drug use. For example, annual use of any illicit drug among college students declined from 50% in 1982 to 46% in 1985, and monthly use dropped from 31% to 26%.

- Also, for most individual classes of drugs, the trends since 1980 among those enrolled in college tend to parallel those for that age group as a whole, as well as the trends observed among seniors. That means that for most drugs there has been a decline in use over that time interval.

- For example, there was a decline in the annual prevalence of marijuana among college students between 1980 and 1984 from 51% to 41% but the decline halted in 1985. These changes are highly parallel to the changes observed for the age group as a whole and proportional to the degree of change occurring among seniors.

- Daily marijuana use among college students fell significantly between 1980 and 1985, from 7.2% to 3.1%, as it did for the age group as a whole and as it did among high school seniors.

- In proportional terms, one of the largest declines observed among college students is for LSD, with annual prevalence falling from 6.3% in 1982 to 2.2% in 1985. This is a proportionately larger drop than was observed among seniors, but parallels pretty closely the age group as a whole.

- An appreciable decline also occurred for stimulant use, for which annual prevalence dropped from 21% in 1982 to 12% in 1985. Proportionately this also is a considerably larger drop than among seniors, but is fairly parallel to the overall change among those of college age.

- Methaqualone showed a dramatic drop among college students, going from an annual prevalence of 7.2% in 1980 to 1.4% in 1985. Again, this drop has been greater than among high school students, though only slightly greater, and parallels the changes in this age group as a whole.

- Barbiturate use was already quite low among college students in 1980 (at 2.9% annual prevalence) but it fell more than half to 1.3% by 1985. This proportional decline was, once again, more sharp than among high school students, but this time a little less sharp than among the young adult sample taken as a whole.

- The annual prevalence of tranquilizer use dropped by half in the period 1980-1984, from 6.9% to 3.5%. No further decline was observed in 1985. Again, this is a larger proportional drop than among high school seniors, but about average for the entire age group.

- Unlike what happened among high school seniors, the use of opiates-other-than-heroin did not rise in 1985 among college students; rather, it fell to an annual prevalence of 2.4%, from 3.8% in 1984. This rate is considerably below the 1980 figure for college students of 5.1%, and the overall decline closely parallels what has been happening among young adults generally. High school seniors, by comparison, have shown no decline since 1980 in the use of this class of drugs.

- Like the high school seniors, college students showed a relatively stable pattern of cocaine use between 1980 and 1984 and a small increase in annual prevalence in 1985 (from 16% to 17% among college students, which is not statistically significant). For the whole age group cocaine use remained quite stable throughout the interval 1980-1985, with the result that college students caught up to their age peers with their slight increase in use.

- It is in regard to alcohol use that college students appear to be showing shifts in use which are different from those observed either among their total age group or among high school seniors. Both of the latter groups have shown some drop in the frequency of having five or more drinks in a row during the two-week interval preceding the survey, but college students have not shown this decline. Indeed, they report their highest rates in 1984 and 1985. Thus it is clear that more college students report occasions of heavy drinking than other young adults, and that pattern of drinking may be on the increase among college students at the same time it is showing some falloff among their age mates and among high school students.

  College students also have a thirty-day prevalence of alcohol consumption which is higher than their peers. The difference has changed rather little since 1980, although some divergence does appear in 1985.

  On the other hand, college students generally have had slightly lower rates of daily drinking than their age group taken as a whole, and this fact has changed rather little in the past five years, insofar as both have shown some decline in daily use. In 1985 daily drinking among college students stands at 5.0%, compared with 6.0% for their age group and 5.0% for high school seniors.

- Cigarette smoking among American college students has declined modestly in the period 1980-1985. Thirty-day prevalence fell from 25.8% to 21.5% between 1980 and 1984, then rose slightly (to 22.4%) in 1985 as happened among seniors. The daily smoking rate fell from 18.3% in 1980 to 14.3% in 1985, though the rate of decline decelerated after 1983. While the rates of smoking are dramatically higher than average for the entire age group (including those not in college) the trends are highly parallel.

  Among seniors, however, the trend line for daily use during the 1980-1985 interval has been fairly flat. This divergence of trends between high school and college age graduates is due to the strong cohort effects, discussed earlier, which are observed in cigarette smoking. The recent levelling among high school seniors leads to the prediction that there will be a levelling in the college years (barring the overlay of any important historical events), as seems to be developing already.

- In sum, the trends in substance use among American college students appear to parallel closely those occurring among their age group as a whole, though there are some important differences in absolute levels. The major exception occurs for occasions of heavy drinking, which appears to be falling among those not enrolled full-time in college (as well as among high school seniors) but, if anything, is rising among college students.

  The trends among college students are highly parallel for the most part to the trends among high school seniors, although declines in many drugs over the last half-decade (1980-1985) have been proportionately larger among college students (and for that matter among all young adults of college age).

Sex Differences in Trends Among College Students

One trend which is not obvious from the figures included here is the fact that the proportion of college students who are female has been rising slowly. Females comprised 50% of our 1980 sample of college students, but 55% of our 1985 sample. Given that there exist substantial sex differences in the use of some drugs, we are concerned that over a longer time apparent trends in the levels of drug use among college students might actually be attributable to changes in the sex composition of that population. For that reason, in particular, we present separate trend lines for the male and female components of the college student population. Differences in the trends observed for these two groups are illustrated in Figures 39 through 51, and are discussed below:

- Trends between 1980 and 1985 in the use of any illicit drug other than marijuana or amphetamines are very parallel for male and female college students, with both groups showing slight declines. Female college students show a sharper decline between 1981 and 1982 in use of any illicit drug and use of any illicit drug other than marijuana, but part of the decline is due to the artifactual over-reporting of amphetamine use prior to 1982. Since 1982 (when the revised amphetamine questions were introduced) there have been parallel slight declines in both groups for all three measures of illicit drug use. For example, annual use of any illicit drug among male college students declined from 55% in 1982 to 51% in 1985, and the corresponding figures for female students are 45% and 43%.

- For several specific drugs, trends in the annual prevalence of use for male and female college students have also been highly parallel. These include marijuana, cocaine, tranquilizers, heroin, and alcohol.

- For another group of three drugs—LSD, methaqualone, and barbiturates—there has been evidence of a convergence in usage rates between the sexes. In all three cases, both sexes are moving toward convergence near 0%.

- LSD, for example, shows an almost complete elimination of a sizeable sex difference in 1980 (with males higher), primarily due to a large drop in use by males.

- A substantial sex difference in methaqualone use (males higher) also was erased over the interval, as use by both sexes declined, but with males declining substantially more.

- A 1980 sex difference in barbiturate use (males higher) was virtually eliminated by 1982: both sexes have declined in parallel since.

- Stimulant use also shows some convergence of use between 1982 (when the revised questions were first introduced) and 1985. While use by both sexes is dropping, males (who have consistently been higher) have dropped more.

- Among the illicit drugs, only in the case of opiates other than heroin is there evidence that there has been any divergence between the sexes. Between 1983 and 1985 use by females declined steadily while use by males first rose and then fell some.

- Regarding alcohol use, annual prevalence has remained virtually identical for the two sexes throughout the period. However, there has been some evidence of a divergence in 30-day prevalence since 1982, with females dropping and males rising overall. Roughly the same has been true for daily prevalence (although both sexes dropped in 1985). Perhaps most important, however, has been the divergence in occasions of heavy drinking. We can see in Figure 50c that college males account for the overall difference in trends between college students and their larger age group. Between 1982 and 1985 the prevalence of such heavy drinking has risen from 52% to 57% among college males, whereas among college females it has dropped from 37% to 34%.

- The case is less clear for cigarettes. Since 1980 cigarette smoking has consistently been higher among females than males in college. While the sex differences appeared to narrow during the middle of that five year interval, they are about as large in the 1985 survey as they were in 1980.

OTHER FINDINGS FROM THE STUDY

Each year this section presents additional recent findings from the Monitoring the Future study. Some of these have been published elsewhere; however, the first two analyses included here—on the use of non-prescription stimulants and daily marijuana use—are not reported elsewhere.

The Use of Non-Prescription Stimulants

As is discussed in other chapters of this report, between 1979 and 1981 we observed a substantial increase in reported stimulant use by high school students. We had reason to believe that a fair part of that increase was attributable to non-prescription stimulants of two general types—"look-alike" drugs (pseudo-amphetamines, usually sold by mail order, which look like, and have names which sound like, real amphetamines) and over-the-counter stimulants (primarily diet pills and stay-awake pills). These drugs usually contain caffeine, ephedrine, and/or phenylpropanolamine as their active ingredients.

Beginning with the 1982 survey we introduced new questions on some questionnaire forms in order to more accurately assess the use of amphetamines as well as to assess the use of the "look-alikes," diet pills, and stay-awake pills of the non-prescription variety. For example, on one of the five questionnaire forms respondents were asked to indicate on how many occasions (if any) they had taken non-prescription diet pills such as Dietac, Dexatrim, and Prolamine (a) in their lifetime, (b) in the prior twelve months, and (c) in the prior thirty days. (These correspond to the standard usage questions asked for all drugs.) Similar questions were asked about non-prescription stay-awake pills (such as No-Doz, Vivarin, Wake, and Caffedrine) and the "look-alike" stimulants. (The latter were described at some length in the actual question.)

On three of the five questionnaire forms in 1982 and 1983 (and in all questionnaire forms thereafter) respondents were also asked about their use of prescription amphetamines, with very explicit instructions to exclude the use of over-the-counter and "look-alike" drugs. These questions yielded the data described in this volume as "stimulants, adjusted." Here we will refer to them as "amphetamines, adjusted," to distinguish them more clearly from the non-amphetamine stimulants.

Prevalence of Use in 1985

- Table 32 gives the prevalence levels for these various classes of stimulants. As can be seen, a substantial proportion of students (29%) have used over-the-counter diet pills and 7% have used them in just the past month. Some 0.9% are using them daily.

TABLE 32

Various Stimulants: Trends in Lifetime, Annual, and Thirty-Day Prevalence by Sex

(Entries are percentages)

	Diet Pills					Stay-Awake Pills					Look-Alikes				
	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84–'85 change
Lifetime Prevalence															
Total	29.6	31.4	29.7	28.7	−1.0	19.1	20.4	22.7	26.3	+3.6ss	15.1	14.8	15.3	14.2	−1.1
Males	16.5	17.4	14.8	14.8	0.0	20.2	22.3	23.2	28.0	+4.8s	13.6	14.2	14.1	14.1	0.0
Females	42.2	44.8	43.1	41.5	−1.6	16.9	18.2	21.7	24.9	+3.2	15.1	14.4	15.2	13.8	−1.4
Annual Prevalence															
Total	20.5	20.5	18.8	16.9	−1.9	11.8	12.3	13.9	18.2	+4.3sss	10.8	9.4	9.7	8.2	−1.5
Males	10.7	10.6	9.2	9.0	−0.2	12.8	13.8	15.4	19.7	+4.3s	9.5	9.2	9.7	8.3	−1.4
Females	29.5	30.0	27.5	24.4	−3.1	10.0	10.5	12.5	17.0	+4.5ss	10.7	8.6	8.5	7.8	−0.7
30-Day Prevalence															
Total	9.8	9.5	9.9	7.3	−2.6ss	5.5	5.3	5.8	7.2	+1.4	5.6	5.2	4.4	3.6	−0.8
Males	5.0	4.0	4.8	3.7	−1.1	6.0	5.5	6.2	7.7	+1.5	4.0	4.5	4.5	3.8	−0.7
Females	14.0	13.7	14.2	10.7	−3.5s	4.7	4.5	5.5	6.7	+1.2	5.2	5.4	3.8	3.1	−0.7

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

- Very similar proportions are using actual amphetamines (adjusted): 26% lifetime, 7% monthly, and 0.4% daily prevalence.

- Only about half as many students are knowingly using the "look-alikes" as are using diet pills or amphetamines (adjusted): 14% lifetime, 4% monthly, and 0.4% daily prevalence. Of course, it is probable that some proportion of those who think they are getting real amphetamines have actually been sold "look-alikes," which are far cheaper for drug dealers to purchase.

- Stay-awake pills have also been used by a fair number of students: 26% lifetime, 7% monthly, and 0.4% daily prevalence.

- The revised questions on amphetamine use yielded prevalence estimates in 1983 which were about one-quarter to one-third lower than the original version of the question, indicating that the distortion in the recent unadjusted estimates was due to the inclusion of some non-prescription stimulant use.

Subgroup Differences

- Figure 52 shows the prevalence figures for these drug classes for males and females separately. It can be seen that the use of diet pills is dramatically higher among females than among males. In fact, the absolute prevalence levels for females are impressively high, with some 42% reporting some experience with them and 11%—or one in every nine females—reporting use in just the last month. For all other stimulants the prevalence rates for both sexes are fairly close.

- A similar comparison for those planning four years of college (referred to here as the "college-bound"), and those who are not, shows some differences as well (data not shown). As is true for the controlled substances, use of the "look-alikes" and diet pills is lower among the college-bound. For example, the annual prevalence figures for the college-bound vs. the noncollege-bound respectively are 7% vs. 10% for the "look-alikes," and 15% vs. 21% for the diet pills.

  Use of stay-awake pills is actually higher for the college-bound: annual prevalence is 20% vs. 16% for the noncollege-bound.

- There are no dramatic regional differences in the use of diet pills or "look-alikes." The West, however, is distinctly higher in the use of stay-awake pills. Annual prevalence is at 26% in that region, compared to 18%

in the Northeast and North Central, and 13% in the South.

- There are no systematic differences in use of non-prescription stimulants associated with population density.

- The use of all of the non-prescription stimulants (i.e., diet pills, stay-awake pills, and "look-alikes") is substantially higher among those who have had experience with the use of illicit drugs than among those who have not, and highest among those who have become most involved with illicit drugs (data not shown). For example, 1% of those who have abstained from any illicit drug use report ever using a "look-alike" stimulant, compared to 5.4% of those who have used only marijuana, and 35.0% of those who have used some illicit drug other than marijuana.

Trends in Use

- Because these questions were new in 1982, trends can be directly assessed only since then.

- However, it is worth noting that the 1982 figures for amphetamines (adjusted) are higher than the unadjusted figures for all years prior to 1980. (See Tables 7 through 10.) This suggests that there was indeed an increase in amphetamine use between 1979 and 1982—or at least an increase in what, to the best of the respondent's knowledge, were amphetamines.

- In recent years, there have been increased legislative and law enforcement efforts to curb the manufacture and distribution of "look-alike" pills. Perhaps as a result, the use of these pills decreased slightly from 1982 to 1985; for example, annual prevalence went from 10.8% to 8.2%.

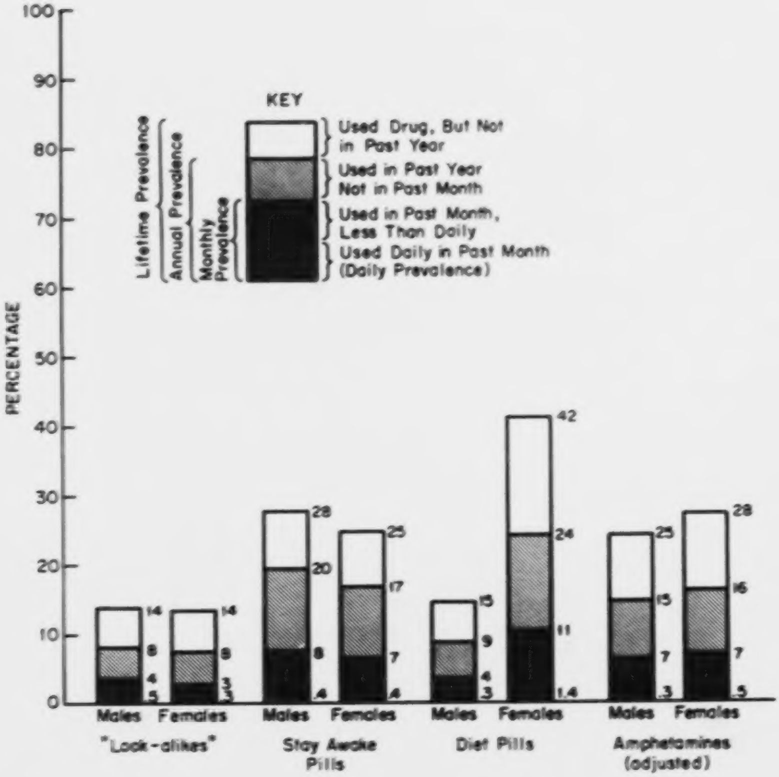
- Use of diet pills decreased slightly between 1982 and 1985.

- Use of stay-awake pills has increased significantly in recent years, particularly in 1985, with a lifetime prevalence of 26% in 1985, up from 19% in 1982. Annual prevalence increased significantly from 12% in 1982 to 18% in 1985. Monthly prevalence showed only a small increase, from 5.5% to 7.2%.

- Subgroup differences in trends for the most part reflect the overall trends, although the West showed a particularly large increase in the use of stay-awake pills in 1985.

FIGURE 52

Prevalence and Recency of Use, by Sex
Amphetamines and Non-Prescription Stimulants, Class of 1985



The Use of Marijuana on a Daily Basis

In past reports in this series, we summarized a number of findings regarding daily marijuana users, including what kind of people they are, how use changes after high school for different subgroups, and what daily users see to be the negative consequences of their use.* In 1982 a special question segment was introduced into the study in one of the five questionnaire forms in order to secure more detailed measurement of individual patterns of daily use. More specifically, respondents were asked (a) whether if at any time during their lives they had ever used marijuana on a daily or near-daily basis for at least a month and, if so, (b) how recently they had done that, (c) when they first had done it, and (d) how many total months they had smoked marijuana daily, cumulating over their whole lifetime. The results of our analyses of these questions follow.

Lifetime Prevalence of Daily Use

- Current daily use, defined as use on twenty or more occasions in the past thirty days, has been fluctuating widely over the past eight years, as we know from the trend data presented earlier in this report. It rose from 6.0% among seniors in 1975 to 10.7% in 1978, then down to 4.9% in 1985.

- For the Classes of 1982 - 1984, we have found the lifetime prevalence of daily use for a month or more to be far higher than current daily use—e.g., at 15.6% or one in every six seniors in 1985. In other words, the proportion who describe themselves as having been daily or near-daily users at some time in their lives is three times as high as the number who describe themselves as current daily users. However, we believe it very likely that this ratio has changed dramatically over the life of the study as a result of the large secular trends in daily use. Therefore, it would be inaccurate to extrapolate to the Class of 1978, for example, and deduce that their lifetime prevalence of daily use was three times their 10.7% current use figure. (An investigation of data from a follow-up panel of the Class of 1978 confirms this assertion.)

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*For the original reports see the following, which are available from the author: L.D. Johnston, "Frequent marijuana use: Correlates, possible effects, and reasons for using and quitting," in R. DeSilva, et al., (Eds.), Treating the marijuana dependent person. New York: The American Council on Marijuana, 1981. Also see L. D. Johnston, "A review and analysis of recent changes in marijuana use by American young people," in Marijuana: The national impact on education, New York: The American Council on Marijuana, 1982.

Utilizing data collected in 1985 from follow-up panels from the earlier graduating classes of 1976 through 1984, we find that the lifetime prevalence of daily marijuana use for these recent graduates (ranging in age from about 19 to 27) is 23%.

Grade of First Daily Use

- Of those seniors who were daily users at some time, over half (57%, or 9% of all seniors) began that pattern of use before tenth grade. However, the secular trends in daily use must be recalled. Active daily use reached its peak among seniors in 1978, when this 1985 graduating class was in fifth grade. Thus we are confident that different graduating classes show different age-associated patterns.

- Nearly all who were to become daily users by the end of high school had done so by the end of grade ten (79% of the eventual daily users). The percentages of all seniors who started daily marijuana use in each grade level is presented in Table 33.

Recency of Daily Use

- Two-thirds (68%) of those who report ever having been daily marijuana users (for at least a one month interval) have smoked that frequently in the past year to year-and-a-half, while one-third (33%) of them say they last used that frequently "about two years ago" or longer. On the other hand, only 26% of all such users (or 4.1% of the entire sample) say they have used daily or almost daily in the past month (the period for which we define current daily users). The fact that only 4.1% of the entire sample report themselves to be current daily users, versus the 4.9% estimate given earlier in this report, suggests that some students have a more stringent definition of "daily or near-daily use" than the operational one used in this report (i.e., use on twenty or more occasions during the past month).

Duration of Daily Use

- It seems likely that the most serious long-term health consequences associated with marijuana use will be directly related to the duration of heavy use. Thus a question was introduced which asks the cumulative number of months the student has smoked marijuana daily or nearly daily. While hardly an adequate measure of the many different possible cross-time patterns of use—a number of which may eventually prove to be important—it does provide a gross measure of the total length of exposure to heavy use.

TABLE 33
Responses to Selected Questions on Daily Marijuana Use by Subgroups

	Total	Sex		4-Year College Plans		Region				Population Density		
		Male	Female	No	Yes	North East	North Central	South	West	Large SMSA	Other SMSA	Non-SMSA
Q. Thinking back over your whole life, has there ever been a period when you used marijuana or hashish on a daily, or almost daily, basis for at least a month?												
No	84.4	82.3	88.0	80.4	89.4	79.1	83.7	91.1	81.5	81.9	84.0	87.2
Yes	15.6	17.7	12.0	19.6	10.6	20.9	16.3	8.9	18.5	18.1	16.0	12.8
Q. How old were you when you first smoked marijuana or hashish that frequently?												
Grade 6 or earlier	1.4	1.6	0.6	1.4	0.8	2.0	1.7	0.9	0.5	2.4	0.9	1.0
Grade 7 or 8	4.1	4.7	2.9	5.8	2.3	4.4	4.3	2.4	5.7	4.3	4.4	3.1
Grade 9 (Freshman)	3.4	3.4	3.0	4.5	2.4	6.5	3.2	1.6	2.7	5.3	3.0	2.5
Grade 10 (Sophomore)	3.4	3.5	3.0	4.0	2.4	4.0	2.6	2.3	5.5	3.5	3.9	2.5
Grade 11 (Junior)	2.7	3.5	2.0	3.3	2.1	3.9	3.4	1.2	2.9	2.4	2.9	2.9
Grade 12 (Senior)	0.7	0.9	0.5	0.6	0.7	0.1	1.1	0.5	1.3	0.2	0.9	0.8
Never used daily	84.4	82.3	88.0	80.4	89.4	79.1	83.7	91.1	81.5	81.9	84.0	87.2
Q. How recently did you use marijuana or hashish on a daily, or almost daily, basis for at least a month?												
During the past month	4.1	4.7	2.8	5.2	2.5	4.8	4.5	2.6	4.6	4.7	4.9	2.3
2 months ago	1.6	2.4	0.8	2.5	0.9	1.7	2.4	1.2	1.2	1.5	1.5	2.0
3 to 9 months ago	2.4	2.7	1.8	1.9	2.1	3.3	2.3	1.3	2.8	3.0	1.8	2.4
About 1 year ago	2.5	2.6	2.0	3.0	1.8	3.6	2.1	1.7	3.0	2.8	2.9	1.6
About 2 years ago	2.8	2.6	2.9	4.1	1.9	4.3	3.0	0.9	3.7	3.0	3.1	2.3
3 or more years ago	2.3	2.5	1.7	2.9	1.4	3.2	2.0	1.2	3.2	3.2	1.8	2.2
Never used daily	84.4	82.3	88.0	80.4	89.4	79.1	83.7	91.1	81.5	81.9	84.0	87.2
Q. Over your whole lifetime, during how many months have you used marijuana or hashish on a daily or near-daily basis?												
Less than 3 months	4.4	4.7	3.9	4.9	3.8	6.3	4.6	2.4	5.2	6.0	4.1	3.7
3 to 9 months	3.3	3.4	2.9	4.1	2.2	4.6	3.5	1.7	3.7	3.4	3.6	2.8
About 1 year	2.3	2.5	1.8	3.2	1.3	2.9	2.6	0.9	3.0	2.0	2.4	2.1
About 1 and 1/2 years	1.0	1.4	0.6	1.5	0.5	0.9	1.3	0.5	2.0	0.8	1.3	1.0
About 2 years	2.2	2.3	1.9	2.8	1.5	2.8	1.6	1.7	2.9	2.5	2.1	1.8
About 3 to 5 years	1.8	2.4	0.8	2.0	1.3	2.7	1.5	1.7	1.5	2.5	2.0	0.9
6 or more years	0.6	0.9	0.1	1.0	0.1	0.8	1.1	0.0	0.2	0.9	0.4	0.5
Never used daily	84.4	82.3	88.0	80.4	89.4	79.1	83.7	91.1	81.5	81.9	84.0	87.2
N =	(3152)	(1442)	(1595)	(1067)	(1756)	(739)	(870)	(942)	(600)	(817)	(1364)	(971)

NOTE: Entries are percentages which sum vertically to 100%.

- Table 33 gives the distribution of answers to this question. It shows that almost two-thirds (64%) of those with daily use experience have used "about one year" or less cumulatively—at least by the end of twelfth grade. In fact, more than a quarter (28%) have used less than three months cumulatively.

- On the other hand, over one-fourth (29%, or 5% of all seniors) have used "about two years" or more cumulatively on a daily or near-daily basis.

Subgroup Differences

- There is some sex difference in the proportion having ever been a daily user—18% for males and 12% for females. Furthermore, the cumulative duration of daily use is distinctly longer for the males. These two sex differences combine to account for the large male-female difference in current daily use. There is also some difference in their age at onset, with the males tending to start earlier on the average.

- Whether or not the student has college plans is strongly related to lifetime prevalence of daily use, as well as to current prevalence. Of those planning four years of college, 11% had used daily compared with 20% of those without such plans. And the college-bound users show a distinctly shorter cumulative duration of use, with a lower proportion of them still using daily. Nevertheless, among those in each group who did use daily, the age-at-onset pattern is fairly similar.

- There are some large regional differences in lifetime prevalence of daily use, all consistent with those found for current daily use. The Northeast is highest, with 21% having used daily at some time, the West and North Central are in the middle at 19% and 16% respectively, and the South is the lowest at 9%.

- The subgroup differences associated with urbanicity are likewise similar to those found for current daily use. Lifetime prevalence of daily marijuana use is 18% in the large cities, 16% in the smaller cities, and 13% in the non-urban areas.

Trends in the Use of Marijuana on a Daily Basis

- Compared to the class of 1982, significantly fewer seniors in the class of 1984 had described themselves as having been daily or nearly daily users of marijuana at some time in their lives (21% vs. 16%); in 1985 the proportion was essentially unchanged (16%).

TABLE 34

Trends in Daily Use of Marijuana in Lifetime by Subgroups

	Percent ever used					Percent reporting first use prior to tenth grade				
	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84 – '85 change	Class of 1982	Class of 1983	Class of 1984	Class of 1985	'84 – '85 change
All seniors	20.5	16.8	16.3	15.6	−0.7	13.1	11.1	10.9	8.8	−2.1s
Sex:										
Male	20.1	18.1	17.2	17.7	+0.5	12.9	12.1	11.8	9.8	−2.0
Female	18.0	13.5	12.9	12.0	−0.9	11.5	8.3	8.0	6.5	−1.5
College Plans:										
None or under 4 yrs	22.5	20.3	18.9	19.6	+0.7	14.2	13.5	12.3	11.8	−0.5
Complete 4 yrs	13.8	10.5	10.7	10.6	−0.1	8.2	6.5	6.6	5.5	−1.1
Region:										
Northeast	25.1	20.4	24.1	20.9	−3.2	17.3	11.9	17.2	12.9	−4.3
North Central	21.1	15.9	12.8	16.3	+3.5	13.3	12.4	8.4	9.1	+0.7
South	15.7	12.7	14.0	8.9	−5.1ss	9.3	8.3	8.5	5.0	−3.5s
West	20.8	21.4	17.6	18.5	+0.9	12.6	13.9	12.1	8.9	−3.2
Population Density:										
Large SMSA	23.8	20.0	19.4	18.1	−1.3	15.6	13.7	12.4	12.0	−0.4
Other SMSA	20.3	18.2	16.6	16.0	−0.6	12.5	12.0	11.5	8.3	−3.2s
Non-SMSA	17.9	12.6	13.2	12.8	−0.4	11.7	8.2	8.5	6.6	−1.9

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

- Between 1982 and 1985, the decline was stronger among females (from 18% in 1982 to 12% in 1985) than among males (20% to 18%).

- Both the college-bound and noncollege-bound groups declined between 1982 and 1985 by about 3% each.

- Lifetime prevalence is down in all four regions between 1982 and 1985, with the South showing the largest decline (from 16% in 1982 to 9% in 1985). The other regions are down by 2-5%.

- All three population density levels showed 1982 to 1985 declines of 4-6%.

- The trends in daily use of marijuana at earlier grade levels parallel very closely the trends in lifetime prevalence (see Table 34).

A Further Look at Cocaine Use*

In the cited chapter on cocaine, and in a subsequent NIDA-sponsored press science briefing, we provided some information about the levels of and recent trends in cocaine use among America's adolescents and young adults, as well as some of their attitudes and beliefs about the drug, and their reasons for using it. We also examined cross-time patterns of use through 1984, certain predictors of use, and some of the conditions of the social and physical environments which are associated with use. Most of the results have been presented earlier in the present report; here we will very briefly summarize the findings.

- Overall, we found levels of cocaine use among seniors to be relatively stable for the years between 1980 and 1984, after a period of rapid increase between 1976 and 1979. The increase was particularly strong in two regions of the country, the Northeast and West, as shown in Figure 15. (Figure 15 contains data updated through 1985.) Exposure to use and use by friends moved in parallel to self-reported use, as would be expected, assuming valid measures. Perceived availability also moved in tandem with these other measures.

- The great majority of the 1984 seniors believed regular use to be dangerous, and 80% disapproved of even experimenting with cocaine. Use was found most frequently in the West and Northeast regions of the country, in more urban areas, among males, and among those who are not college-bound. Neither socioeconomic status nor personal income was very strongly associated with use; but a history of truancy, going out frequently in the evenings, and having relatively low religious involvement were. Cocaine users tended to use other illicit drugs (particularly marijuana) and to be smokers and heavy drinkers much more frequently than nonusers. Thus there was little evidence that cocaine involves a separate drug-using syndrome. In fact, it is not uncommon for cocaine users to concurrently use marijuana or alcohol or both.

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*O'Malley, P.M., Johnston, L.D., & Bachman, J.G. "Cocaine use among American adolescents and young adults." In N.J. Kozel & E.H. Adams (Eds.), Cocaine Use in America: Epidemiologic and Clinical Perspectives (NIDA Research Monograph 61) (ADM) 85-1414. Washington, D.C.: National Institute on Drug Abuse, 1985.

- When taking cocaine, high school students most often snorted it, though some (24% of recent users) smoked it while only 4% of the users injected. It was almost always used with other people present, often at a party but more often with just one or two people present. Most use occurred in the evening, with very few young people using at school and a minority ever using at home or in a car.

- Among the reasons most often cited for using cocaine are: "to see what it's like," "to get high," and "to have a good time with my friends." Only about 1% of recent users say they use it because they are "hooked," and only about 4% say they have tried to quit and been unable to do so. In fact, most of those who used in high school do not show a cross-time progression to heavier use in the three to four years following graduation, which suggests that dependence either develops rather slowly or develops with relatively low frequency among moderate and light users.

Self-Reported Reasons for Using Drugs

The reasons that high school seniors use drugs and alcohol was the subject of an extended article appearing in the Journal of Drug Issues.* On one of the study's five questionnaire forms, respondents were asked to indicate which of a list of thirteen or more reasons were the most important reasons for their use of each of a number of licit and illicit substances they had used in the previous twelve month period. The responses of those who had used only once or twice in their lifetimes, and had used in the past year, were examined separately from those of the more frequent users, to provide some perspective on the differences in motivation associated with initial use versus continued use.

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*L.D. Johnston and P.M. O'Malley. "Why do the nation's students use drugs and alcohol: Self-reported reasons from nine national surveys." Journal of Drug Issues, 1986, 16, 29-66.

- In answer to one of several research questions addressed in the analyses, we found that, among the set of reasons offered to respondents, there was a tendency for clusters of reasons (or factors) to emerge that are similar across the different drugs. There seemed to be a social or recreational factor consisting of the reasons "to get high" and "to have a good time with friends." Several self-reported reasons having to do with using drugs to cope with negative affect also tended to cluster, including "to get away from my problems," "to deal with anger and frustration," "to get through the day," and "to relax or relieve tension." Using a drug "to increase the effects of other drugs" tends to be correlated with using "to decrease the effects of other drugs," probably due to the fact that both are indicators of the respondent's degree of multiple drug involvement.

- Across the full set of substances, the reason most often given for using any of them is "to have a good time with my friends," (mentioned for at least one drug by 65% of those reporting using any of them). A substantial but smaller proportion mention the correlated reason "to feel good or get high" (49%) as a reason for using one or more of the drugs. Clearly, these social-recreational reasons comprise a major reason for adolescent substance use, particularly for continued use as opposed to initial use. "To relax or relieve tension" was also mentioned by slightly less than half (41%). Alcohol and marijuana are the two drugs used by the most seniors for both of these reasons.

- The cluster of reasons related to coping with negative affect tend to be mentioned by a relatively large proportion of the users of the various central nervous system depressant drugs, and particularly by the more frequent users of alcohol, barbiturates, and tranquilizers. In fact, both the proportion and absolute number of daily alcohol users who mention such reasons for their use has been rising—perhaps the most disturbing finding to emerge from these analyses.

- For each drug, the more frequent users indicate a greater number of reasons for their use than less frequent users. The social-recreational reasons in particular are mentioned considerably more frequently by frequent users, as well as by those having to do with coping with negative affect. For the central nervous system stimulants, amphetamines and cocaine, there is a considerable increase as a function of level of use in the mentions of "to get more energy," "to stay awake," and "to get through the day."

- We think it likely that this multiplication of purposes at increased levels of use reflects both a self-selection of the more psychologically "needy" (or otherwise motivated into heavier use), as well as the result of heavier users learning from their experiences about the ends that can be achieved with a given drug. One conclusion seems clear, however: many of the more frequent users (and particularly the daily marijuana and alcohol users) are using these substances for psychological coping—that is, to deal with negative affect, boredom, and (for the stimulants) to gain more energy.

- A comparison of males and females shows far more similarities in their reasons for using the various substances than differences. The few differences that exist generally show females somewhat less inclined to be using drugs for social-recreational reasons and, at higher frequency levels of use, somewhat more likely to mention reasons having to do with coping with negative affect, or with self-medication or other functional reasons. This finding may help to explain the finding reported earlier in this monograph, that nearly equal proportions of males and females have had some experience with illicitly-used substances despite the fact that, on individual substances, prevalence and frequency levels tend to be distinctly lower among females than among males.

- As for there being any changes across time in the patterns of reasons given by students for their use of these various substances, we find only a limited amount of change. The major exception has been for amphetamines, where there has been some shift away from social-recreational reasons for use and a shift toward more instrumental reasons ("to lose weight," "to stay awake") and coping reasons ("to get through the day," "to get more energy"). The fact that the underlying prevalence of use for most of these substances has been shifting during the historical period in question, means that a shift in the proportion of recent users giving a particular reason may tell a different story than trends in the proportion of the entire population giving that reason. Therefore, both types of data were examined.

- We conclude from these various findings that the type of information gathered by self-report from respondents on the reasons for their using various substances can be very useful in helping to develop an understanding of the behavior in a given population or subpopulation and for adding some qualitative understanding of some of the cross-time trends in use. In general, the findings tend to be highly replicable across independent samples, to show a high order of construct validity, and to show orderly patterns of change. It should be noted, however, that large samples are required to attain these outcomes in surveys of the normal population, given the relatively low frequency with which many of the illicit substances are used.

- One use of such data, which we view as holding promise, is to characterize subgroups of users of a particular substance based on their pattern of reasons for use. One would expect that somewhat different predictors, outcomes, and natural histories might be distinguished for such differentiated subgroups. For example, people who are primarily social-recreational users of a drug might have quite different characteristics than those who are primarily using it for self-medication or other instrumental purposes. No doubt "pure types" will be in the minority, but we nevertheless believe that such an approach to differentiating subgroups of users holds considerable promise.

- Another clear implication from the data is that the frequently observed tendency to conceptualize and discuss illicit "drug use" in unidimensional or monolithic terms can be misguided. The different substances tend to have qualitatively quite different profiles of reasons for which they are used. While there does exist a fairly high degree of covariation among the usage measures for the various substances —undoubtedly due in considerable part to such general underlying factors as propensity for risk taking, willingness to violate social norms, inclination to use chemicals to alter mood and consciousness, and involvement in social-recreational drug use in particular—there is still an appreciable amount of variance in the use of each substance that is not explainable by use of the other substances. A better understanding of the more specific and unique reasons for using particular classes of substances may enhance our ability to predict, explain, and understand substance use in all of its forms.

Implications for Prevention

In a recent chapter for a NIDA research monograph we discussed some of the implications the results of the current study may have for prevention strategy.* One is that the data on grade at first use suggest that at present prevention programs need to begin at quite a young age if they are to reach youngsters before some "critical mass" of them have already begun to use drugs, and to proselytize to potential new users. The point is made that the appropriate age for intervention may vary over time and by drug. Since cocaine initiation continues into the mid-twenties, continued prevention efforts with late adolescents and young adults are called for in the case of that drug, at least.

The dramatic rise in perceived harmfulness of regular marijuana use, which occurred during the same historical period in which daily use dropped by half, strongly suggests that there may be more of a rational decision-making component to drug using behaviors than has been previously supposed. Of course, a concurrent change in attitudes and related behaviors does not necessarily mean that the change in attitude caused the change in behavior. Therefore in the chapter we pursue further evidence that there is such a linkage by looking at trends in the reasons seniors have given for either abstaining from marijuana use altogether, or for quitting use. ("Quitters" were defined as those who have used at least once in the past, but not at all in the month prior to the survey, and who said that they probably or definitely would not be using in the future. "Abstainers" were defined as those who had never tried marijuana.)

Figure 53 in this report gives the chapter original figures showing trends in the frequency with which these two groups of seniors have been checking "concern about psychological damage" and "concern about physical damage" as reasons for their non-use. They show a considerable increase over time in the frequency of mentions for these two reasons in both groups—though particularly among quitters.

Since changes in price or availability might also account for a change in use, we provide in Figure 54 trends on the frequency with which these reasons are mentioned. Clearly they have little or no power to explain the change in daily use between 1978 and 1983, while the questions about perceived dangers do. Taken along with the other data from the study suggesting little or no change among all seniors in perceived availability for the past ten years, we take this as strong evidence that "supply side" factors did not account for the downturn, which in turn suggests that "demand side" factors could, and indeed did. We believe the increase in the mentions of health concerns as reasons for abstaining and quitting provides evidence, in addition to that already provided by the overall change in perceived risk, that these attitudes

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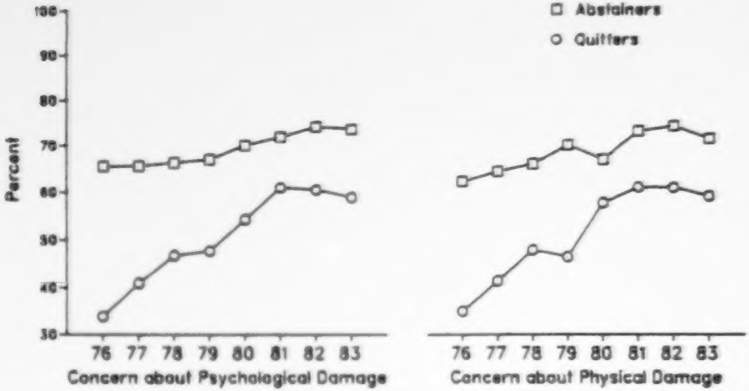
*See Johnston, L.D. The etiology and prevention of substance use: What can we learn from recent historical changes? In C.L. Jones and R.J. Battjes (Eds.), Etiology of Drug Abuse: Implications for Prevention (NIDA Research Monograph 56) (ADM) 85-1335. Rockville, MD: National Institute on Drug Abuse, 1985.

FIGURE 53

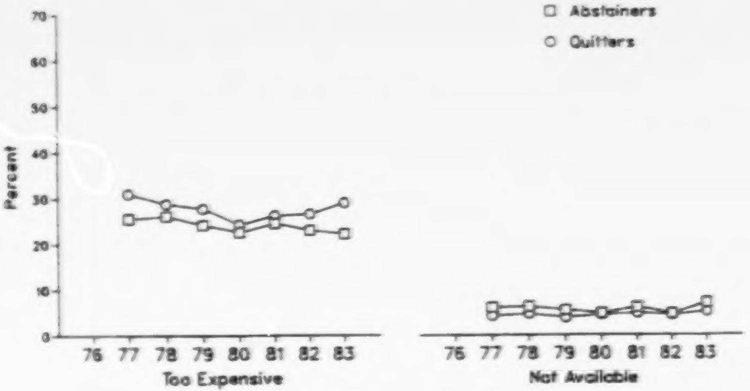
Reasons Given for Abstaining From and Quitting Marijuana Use: Possible Physical and Psychological Harm



NOTE: Weighted N's for abstainers range from 1,198 to 1,808 yearly; weighted N's for those who quit using marijuana range from 730 to 1,067.

FIGURE 54

Reasons Given for Abstaining From and Quitting Marijuana Use: Cost and Availability



NOTE: Weighted N's for abstainers range from 1,198 to 1,808 yearly; weighted N's for those who quit using marijuana range from 787 to 1,067.

account for much of the decline in daily use. (In an article currently under review we will add still further evidence to support that assertion.)

It is unfortunate that data on perceived risk have not routinely been gathered for PCP, as well, since we think it likely that increased knowledge about the very real dangers of that drug also played a role in its substantial decline in use between 1979 and 1982. However, such data are not available to examine the hypothesis. Data on trends in the perceived risk of LSD in the early 1970's may also have told a very comparable story to that observed for marijuana in the late 1970's and early 1980's.

If our contention is correct that the dangers perceived to be associated with a drug influence the likelihood that young people will use it, there are substantial prevention implications which derive from that fact. One is that it is important for prevention purposes to establish scientifically the facts about consequences. Another is that it is important to communicate them in a credible way to young people. In the chapter we argue that "the system" squandered whatever little credibility it had with young people in the early 1970's by presenting inaccurate and exaggerated claims in public service announcements about the effects of many drugs. We argue that the importance of retaining credibility cannot be overemphasized. In recent years it appears that the "system" has gained credibility on this issue—in part because the cautions have come from scientific research communicated by the press. While we believe that a more active use of the electronic media for prevention purposes is desirable at this juncture, we also would caution that the mistakes of the early 1970's not be repeated.

Some ways in which surveys such as the present one might be used more directly in the prevention process are also listed in the chapter.

1) It appears that young people often have an exaggerated view of the proportion of their age group who use drugs—a type of "collective ignorance." Surveys, therefore, might be used to affect normative behavioral expectations, by showing that "not everybody is doing it," whatever "it" may be, either among people of the same age as the target audience, or among somewhat older groups who may serve as role models.

2) Survey results may be used in a similar way to influence perceived normative values, by showing, for example, that most young people disapprove of even trying all illicit drugs except marijuana.

3) The images of perceived social connotations of using various drugs may be influenced by feeding back results on the images most young people have of being users of various drugs. The Monitoring the Future study, for example, released findings on the ways in which smoking tended to change the manner in which a senior is perceived by his or her peers—changes which were nearly all unfavorable.

4) The problems reported by users to have resulted from their use of various drugs may be emphasized. For example, we have reported elsewhere that of the daily marijuana users in a recent survey, fully 42% thought the drug caused them to have less energy, one-third thought it made them less interested in other activities, one-third thought it hurt their school and/or job performance, etc.

We conclude the chapter by noting that those trying to prevent drug involvement on the part of young people are finally moving with the current, instead of against it, and that the potential for achieving appreciable results may be better now than at any time in the past twenty years.

Other Data on Correlates and Trends

Hundreds of correlates of drug use, without accompanying interpretation, may be found in the series of annual volumes from the study entitled Monitoring the Future: Questionnaire Responses from the Nation's High School Students.* For each year since 1975, a separate hardbound volume presents univariate and selected bivariate distributions on all questions contained in the study. Many variables dealing explicitly with drugs—variables not discussed here—are contained in that series; and bivariate tables are provided for all questions each year distributed against an index of lifetime illicit drug involvement. A special cross-time reference index is contained in each volume to facilitate locating the same question across different years. One can thus derive trend data on some 1500 to 2000 variables for the entire sample, or for important sub-groups (based on sex, race, region, college plans, or drug involvement).

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*This series is available from the Publications Division, Institute for Social Research, The University of Michigan, Ann Arbor, Michigan 48109.

Appendix

ESTIMATES ADJUSTED FOR ABSENTEES AND DROPOUTS

One question which has arisen over the years in regard to this study has concerned the degree to which the prevalence and trend estimates derived from high school seniors are an accurate reflection of the reality which pertains for all young people who would be in the same class or age cohort, including those who have dropped out of school by senior year. In 1985 we published an extensive chapter on this topic in a volume in the NIDA Research Monograph series.* We will attempt in this Appendix to summarize the main points relevant to this issue of sample coverage.

First, it should be noted that two segments of the entire class/age cohort are missing from the data collected each year from seniors: those who are still enrolled in school but who are absent that day (the "absentees"), and those who have formally left school (the dropouts). The "absentees" constitute virtually all of the non-respondents shown in the response rate table given in the Introduction to this volume (since refusal rates are negligible) or about 18% of all seniors (or 15% of the class/age cohort). Based on our review of available Census data the dropouts account for approximately 15% of the class/age cohort.

The methods we used to estimate the prevalence rates for these two missing segments are summarized briefly here. Then, the effects of adding in these two segments to the calculation of the overall prevalence rates for two drug classes are presented along with the impact on the trend estimates. Two illicit drugs have been chosen for illustrative purposes: marijuana, the most prevalent of the illicit drugs; and cocaine, one of the more dangerous and less prevalent drugs. Estimates for high school seniors are presented for both lifetime and 30-day prevalence for each drug.

The Effects of Missing Absentees

To be able to assess the effects on the estimates of drug use of missing the absentees, we included a question in the study which asks students how many days of school they had missed in the previous four weeks. Using this variable, we can place individuals into different strata as a function of how often they tend to be absent. For example, all students who had been absent 50% of the time could form one stratum. Assuming that absence on the day of the administration is a fairly random event, we can use the respondents in this stratum to represent all students in the stratum, including the ones who happen to be absent that particular day. By giving them a double weight, they can be used to represent both themselves and the other 50% of their stratum who were absent that day. Those who say they were in school only one-third of the time would get a weight of three to represent the two-thirds in their stratum who were not there, and so forth.

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*Johnston, L.D. & O'Malley, P.M. Issues of validity and population coverage in student surveys of drug use. In B.A. Rouse, N.J. Kozel, & L.G. Richards (Eds.), Self-report methods of estimating drug use: Meeting current challenges to validity. (National Institute on Drug Abuse Research Monograph 57). Washington, D.C.: U.S. Government Printing Office (ADM) 85-1402, 1985.

Using this method, we found that absentees as a group have appreciably higher than average usage levels for all licit and illicit drugs. However, looking at 1983 data, we found that their omission did not depress any of the prevalence estimates in any of the drugs by more than 2.7%, due to the fact that they represent such a small proportion of the total target sample. (The correction across all 13 drugs in lifetime prevalence averaged only 1.4%.) Considering that a substantial proportion of those who are absent likely are absent for reasons unrelated to drug use—such as illness and participation in extracurricular activities—it may be surprising to see even these differences. In any case, from the point of view of instructing policy or public perceptions, the small "corrections" would appear to be of little or no significance. (The correction across all 13 drugs in lifetime prevalence averaged only 1.4%.) Further, such corrections should have virtually no effect on cross-time trend estimates unless the rate of absenteeism were changing appreciably; and we find no evidence in our data that it is. Put another way, the presence of a fairly slight underestimate which is constant across time should not influence trend results. Should absentee rates start changing, then it could be argued more convincingly that such corrections should be presented routinely.

The Effects of Missing Dropouts

Unfortunately, we cannot derive corrections from data gathered from seniors to impute directly the prevalence rates for dropouts, as we did for absentees, since we have no completley appropriate stratum from which we have "sampled." We do know from our own previous research, as well as the work of others, that dropouts have prevalence rates for all classes of drugs substantially higher than the in-school students. In fact, the dropouts may not be too dissimilar from the absentees.

We have consistently estimated the proportion who fail to complete high school to be approximately 15%; Figure A-1 displays the completion rate for the years 1972 through 1985 based on Census data. As the figure indicates, completion rates (and the complement, dropout rates) have been quite constant over this interval for persons 20-24 years old.* (Younger age brackets are more difficult to use because they include some who are still enrolled in high school.) Monitoring the Future probably covers some small proportion of the 15%, in fact, since the survey of seniors takes place a few months before graduation, and

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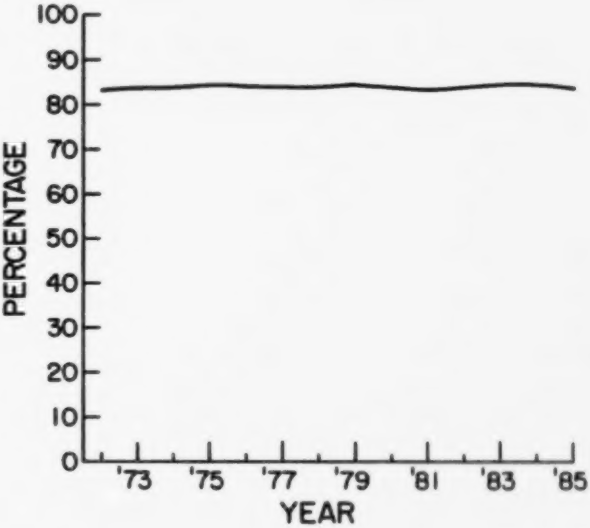
*U.S. Bureau of the Census. *Current Population Reports Series P-20*, various numbers. Washington, DC: U.S. Government Printing Office, various years.

FIGURE A-1

High School Completion by Persons 20–24 Years Old, 1972–1985



Source: U.S. Bureau of the Census, Current Populations Surveys, published and unpublished data; and 1980 Census.

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not everyone will graduate. On the other hand, perhaps 1% to 2% of the age group which Census shows as having a diploma get it through a General Equivalency Degree and thus would not be covered in Monitoring the Future. (Elliot and Voss report this result for less than 2% of their sample in their follow-up study of 2617 ninth graders in California who were followed through their high school years.)* So these two factors probably cancel each other out. Thus, we use 15% as our estimate of the proportion of a class cohort not covered.

Extrapolating to Dropouts From Absentees. To estimate the drug usage prevalence rates for this group we used two quite different methods. The first was based on extrapolations from seniors participating in this study. Using this methods we developed estimates under three different assumptions: that the difference between dropouts and the seniors who participated in the study was equivalent to (a) the difference between absentees and participating seniors, (b) one and one-half times that difference, and (c) twice that difference. The last we would consider a rather extreme assumption. (The method for calculating prevalence rates for the absentees is the one described above.)

The second general method involved using the best recent national data on drug use among dropouts—namely the National Household Surveys on Drug Abuse.** While these surveys have rather small samples of dropouts in the relevant age range in any given year, they should at least provide unbiased estimates for dropouts still in the household population.

Using the first method of estimation, we found that, under the assumption that dropouts are just like absentees, no prevalence rate was changed by more than 5% over the estimate based on 1983 seniors only, even with the simultaneous correction for both absentees and dropouts. The largest correction in 1983 involved marijuana, with lifetime prevalence rising from just under 60% to 64%. Even under the most extreme assumption—which results in exceptionally high prevalence rates for dropouts on all drugs, for example 90% lifetime prevalence for marijuana—the overall correction in any of the prevalence figures for any drug remains less than 7.5%. Again, marijuana shows the biggest correction (7.5% in annual prevalence, raising it from 46% uncorrected to 54% corrected for both absentees and dropouts). As we would have expected, the biggest proportional change occurs for heroin, since it represents the most deviant end of the drug-using spectrum and thus would be most associated with truancy and dropping out.

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*Elliott, D. and Voss, H.L. Delinquency and dropout. Lexington, MA: DC Heath-Lexington Books, 1974.

**Fishburne, P.M., Abelson, H.I., and Cisin, I. National Survey on Drug Abuse: Main Findings 1979 (National Institute on Drug Abuse). Washington, DC: U.S. Government Printing Office (ADM) 80-976, 1980. Also see Miller, J.D., et al. National Survey on Drug Abuse: Main Findings 1982 (National Institute on Drug Abuse). Washington, DC: U.S. Government Printing Office (ADM) 83-1263, 1983.

Extrapolating From the Household Surveys. The second method of estimating drug use among dropouts was by comparing the household survey data on dropouts with the data from those remaining in school. We conducted secondary analyses of the archived data from the 1977 and 1979 National Household Surveys. Analyses were restricted to the age range 17 to 19 years old, since about 95% of the Monitoring the Future respondents fall in this range. Of course, the numbers of cases are small. In the 1977 survey there were only 46 dropouts and 175 enrolled seniors in this age group. In the 1979 survey 92 dropouts and 266 seniors were included.

For marijuana, the estimated differences from the household survey data came out at a level which was at or below the *least* extreme assumption made in the previous method (where dropouts are assumed to have the same drug use levels as absentees). While this may have been comforting to the authors of the present report, we must admit that we believe the household sample underrepresents the more drug-prone dropouts to some degree. Those without permanent residence and those in the prison population, to take two examples, would be excluded from the sample coverage in a household survey. Thus we concluded that estimates closer to those made under the second assumption in the previous method may be closer to reality—that is, that dropouts are likely to deviate from participating seniors by one and one-half times the amount that absentees deviate from them.

Again, we emphasize that there are a number of reasons for dropping out, many of which bear no relationship to drug use, including economic hardship in the family and certain learning disabilities and health problems. At the national level, the extreme groups such as those in jail or without a permanent place of residence are undoubtedly very small as a proportion of the total age group and probably even as a proportion of all dropouts. Thus, regardless of their prevalence rates, they would be unable to move the prevalence estimates by a very large proportion except in the case of the most rare events—in particular, heroin use. We do believe that, in the case of heroin use—particularly regular use—we are very likely unable to get a very accurate estimate even with the corrections used in this paper. For the remaining drugs, we conclude that our estimates based on participating seniors, though somewhat low, are not bad approximations for the age group as a whole.

Effects of Omitting Dropouts On Trend Estimates. Whether the omission of dropouts affects the estimates of *trends* in prevalence rates is a separate question, however. The relevant issues parallel those discussed earlier regarding the possible effects on trends of omitting the absentees. Most important is the question of whether the rate of dropping out has been changing in the country, since a substantial change would mean that seniors studied in different years would represent noncomparable segments of the whole class/age cohort. Fortunately for the purposes of this study, at least, the data in Figure A-1 indicate a very stable rate of dropping out from 1972 to 1985.

Given that there appears to be no sound evidence of a change in the dropout rate, the only reason that trend data from seniors would deviate from trends for the entire class cohort (including dropouts) would be if the constant proportion who have been dropouts for some reason showed trends contrary to those observed among seniors; and even then, because of their small numbers, they would have to show dramatically different trends to be able to change the trend "story" very much for the age group as a whole. There has been no hypothesis offered for such a differential shift among dropouts which these authors, at least, find very convincing.

The one hypothesis which is occasionally heard is that more youngsters are being expelled from school, or voluntarily leaving school, because of their drug use; and that this explains the recent downturn in the use of many drugs being reported by the study. However, it is hard to reconcile this hypothesis with the virtually flat dropout rates over the fourteen year period displayed in Figure A-1, unless one posits a perfectly offsetting tendency for more completion among those who are less drug prone—hardly a very parsimonious set of explanations. Further, the reported prevalence of some drugs has remained remarkably stable throughout the life of the study (e.g., alcohol, opiates other than heroin) and the prevalence of some has risen (cocaine and until recently, amphetamines). These facts are not very consistent with the hypothesis that there has been a recent increased rate of departure by the most drug prone. Certainly more youngsters leaving school in the 80's have drug problems than was true in the 60's. (So do more of those who stay in.) However, they still seem likely to be very much the same segment of the population, given the degree of association that exists between drug use and deviance and problem behaviors of various sorts.

Summary and Conclusions

In sum, while we believe there is some underestimation of the prevalence of drug use in the cohort at large as a result of the dropouts being omitted from the universe of the study, we think the degree of underestimation is rather limited for all drugs (with the possible exception of heroin) and, more importantly, that trend estimates have been rather little affected. Short of having good trend data gathered directly from dropouts, we cannot close the case definitively. Nevertheless, we think the available evidence argues strongly against alternative hypotheses—a conclusion which was also reached by the members of the NIDA technical review on this subject held in 1982.*

> ...the analyses provided in this report show that failure to include these two groups (absentees and dropouts) does not substantially affect the estimates of the incidence and prevalence of drug use.

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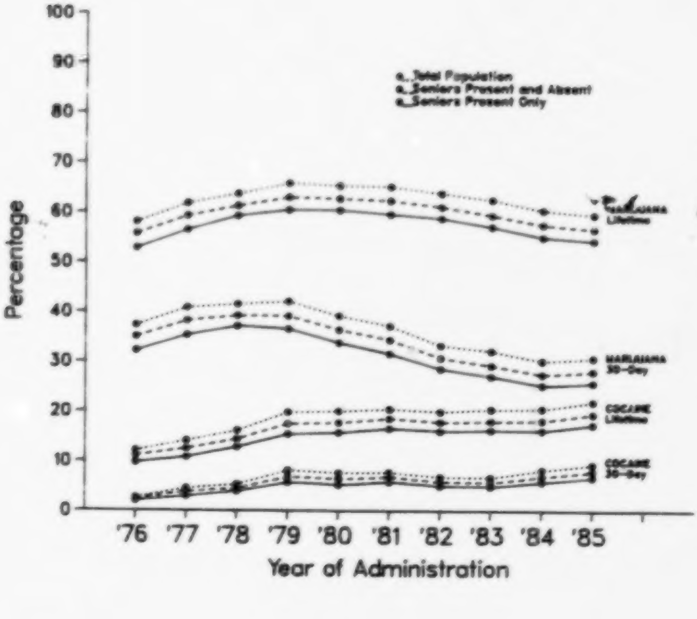
*Clayton, R.R. and Voss, H.L. Technical Review on Drug Abuse and Dropouts. Rockville, MD: National Institute on Drug Abuse, 1982.

FIGURE A-2

Estimates of Prevalence and Trends for the Entire Age/Class Cohort, Adjusting for Absentees and Dropouts



Examples of Revised Estimates for Two Drugs

Figure A-2 provides the prevalence and trend estimates of marijuana and cocaine, for both the lifetime and thirty-day prevalence periods, showing (a) the original estimates based on participating seniors only; (b) the empirically derived, revised estimates based on all seniors, including the absentees; and (c) estimates for the entire class/age cohort. The last estimate was developed using the assumption judged to be most reasonable above—namely that the dropouts differ from participating seniors by one and one-half times the amount that the absentees do. Estimates were calculated separately for each year, thus taking into account any differences from year-to-year in the participation or absentee rate. The dropout rate was taken as a constant 15% of the age group across all years.

As Figure A-2 illustrates, any difference in the slopes of the trend lines between the original and revised estimates are extremely, almost infinitesimally, small. The prevalence estimates are higher, of course, but not dramatically so, and certainly not enough so to have any serious policy-implication effects in the interpretation of the data.